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ABSTRACT

Activities and accomplishments of the Population Council for 1970 are presented in this record. A Presidential Report introduces the account followed by division summaries for the demographic, bio-medical, and technical assistance divisions. The publications program is explained and fellowship awards in the three divisional areas are itemized by country and researcher. Grants and authorizations, financial statements, and a list of trustees, officers, and staff complete the report. (BL)

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The Population Council Annual Report 1970

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The Population Council Annual Report 1970

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Report of the President

The Difficulty of Being Earnest

Scenario 1: You are the prime minister of a developing country. One day a Very Important Person connected with the United Nations, on a quick trip through your capital, tells you as he departs for the airport that you have a serious population problem in your country and that you ought to do something about it. You are beset by nothing but problems, most of them of an urgent character—including the problem of keeping yourself in office so that you can deal with the others. However, you are a conscientious prime minister and you ask one of your aides to try to find out what the VIP could have meant.

He comes back a few months later, reminds you of the assignment, and says that after talking with your few technical experts, he recommends asking the UN for a technical mission. Since that has at least the virtue of delaying difficult decisions, it seems desirable at the moment. In due course the mission comes, in due course it issues its report, and in due course, now about a year later, your aides gather in your office for a few minutes of consultation in your busy schedule, before a decision is made as to what, if anything, to do about your "population problem."

As usual on such large and complex matters, the advice is conflicting. The economists from the planning board think there is a genuine problem and that something substantial ought to be done. But your political advisors tell you of the political risks involved, of potential religious and ethnic opposition, of the current liabilities to be carried by your administration with the economic benefits occurring to someone else a few decades later, of the potential charges that you have failed at development and can only attempt to reduce the number of people or that you are seeking to regulate the private lives of the population or that you are advocating a weakening of national power. Anyway, they say, the people are better off than they have ever been and there is no popular demand for such a program: why borrow trouble?

Meanwhile, other things are pressing, each with a crisis today. What do you do?

Scenario 2: You are a top official in the United States government. After a series of scientific studies looking into American consumption patterns and their effect upon world resources, the United Nations Social and Economic Commission decides that something ought to be done to curb

American affluence and the resulting fall-out in environmental deterioration and ecological imbalance, in order to protect the rest of the world and of course for our own good. Accordingly, the United Nations appoints a technical mission of distinguished experts from other countries to present the case and justify an "action program" to persuade American citizens to voluntarily lower their standard of living by, say, 25 per cent. You are the officer responsible for their reception—at the Commerce Department, with organized labor and organized business, with the Congress and the White House, with the American people. The mission's aim would be supported by some environmental and youth groups in the United States, but neither by the deprived, who want more not less, nor by the affluent, who want still more.

Take the scenario one step further: make the nearly unthinkable assumption that the government did decide to organize an effort to persuade Americans to live less well. You are now responsible for the success of that program. What do you do?

As these scenarios illustrate, efforts to change the behavior of literally millions of people on a day-to-day basis, against the weight of cultural tradition and personal desire, is enormously difficult—to put it mildly. What would you do in the second scenario that would make some progress and still be politically viable? Perhaps it would be easier to change the mind of the UN mission, or at least modify the target, rather than to face in the other direction. In the first scenario, you might do what several prime ministers have done: authorize a quiet family planning program under the banner of maternal & child health, thus moving in the right direction but subsuming controversial demographic means under accepted health ends. Both cases, in short, pose severe political and administrative problems for the government, which often responds by redefining the task. But whatever is done in either case is not likely to "solve" the problem, not in the near term.

Allow me to restate the question with regard to population and the developing countries. The world began to recognize only in the early 1960's that it had a major population problem either in being or on the early horizon—a problem involving the burden of centuries of contrary attitudes and behavior strongly built into an institutional structure of massive durability, subject to a whole range of cultural obstacles, overlaid with political sensitivities, and requiring private change of behavior by millions and millions of people. Given all that, has the problem been "solved" by an intensified effort in the last five years? When the matter is put that way, it

can hardly come as a surprise that the answer is No.

Indeed, it may not be too much to say that on such large social problems (as distinguished from such technological problems as going to the moon), limited progress over a period of years is par. Are there any great social problems involving the participation of large numbers of people on which progress is not limited? Race and ethnic relations, urban crises, the ecological situation, drug use, crime, war and peace, inflation and unemployment, population—it is virtually in the nature of such problems that progress is limited and "solutions" distant, if they exist at all.

Yet "something must be done." What are the programmatic channels of solution for the population problem of the developing world? Two means can immediately be ruled out. The first is an increase in the death rate: no country that has experienced modern means of death control will willingly give it up, nor should it. On the contrary, all feasible efforts will be made to decrease mortality rates even further and those efforts are likely to be successful over the next decades, thus compounding the problem. The second means is emigration, but the great emigrations from Europe to the New World are no model for emulation: there is no political climate for such movement at either the receiving or the sending end, the magnitudes are all against it, there is not sufficient transport for such moves, there is no place to go, and there is not sufficient time for migration to take effect. So we are left with birth rates.

There are four broad ways to lower birth rates. *First* is some form of involuntary fertility control: the famous sterilant in the water supply, a law forbidding the *n*th child, compulsory sterilization after *n* children. There have been paper proposals—typically written in one country but to take effect in another—but there are tremendous difficulties, not the least of which are the ethical issues involved. (But note that coercive measures have often been used, and effectively, in connection with both mortality and migration: for example, compulsory vaccination and immigration restrictions.) In any case, coercion on fertility is not really on the horizon; as someone has said, such a policy would bring down the government before it brought down the birth rate! And a good thing too: here is a case in which the zeal for means forgets the original ends, for if we are after "population control" in order to add to the quality and dignity of human life, how can we diminish that quality and dignity on the way to a "solution"?

Second are basic changes in social institutions that have resulted in lower birth rates at other times and in other places: a sharp decline in infant and child mortality rates in order to give people a realistic expectation that their children will live; a sharp increase in standard of living, usually attending industrialization; urbanization, to an extent; extension of popular education to the entire community, including the girls; incorporation of women into the labor force to give them an alternative to childbearing, raising the age of marriage, or more generally the liberation of women from their traditional status. Taken together, this is close to what we mean by "modernization," and this is what virtually every developing country is moving toward as rapidly as circumstances permit. It is a long and difficult and troubled path, as the West well knows, but the developing world is embarked, with prospects ahead of truly major changes in social and economic institutions. While we pretty well know that such measures will bring about lowered fertility rates, do we know how to bring about those conditions any better than we now seek to do?

Third are incentives and disincentives, i.e., tax and welfare benefits and liabilities. Many social services now appear to be pronatalist in character—family and children allowances, maternity leaves and payments, tax deductions for children, housing preferences for larger families—and they could be withdrawn or even reversed, e.g., a sharply graduated tax on children after the *n*th. Moreover, some people have proposed payments for the practice of contraception and for periods of nonbirth. Such schemes have not been tried much and they, too, have their own difficulties, notably, in many countries, the simple difficulty of administering complicated schemes in the absence of the necessary infrastructure. As has been said, any country that could administer such a program probably does not need it in the first place.

Finally, *fourth*, are programs to spread voluntary fertility control, in the form of the many national family planning programs that have been established around the developing world in the past decade or less. There are variants of the usual program, e.g., integration of maternal/child health and family planning on a large scale, scientific work to improve the contraceptive technology, major reliance on persuasive communications, even the inclusion of induced abortion as a demographic measure. But the central effort is to extend information and service so that individual couples can better

control their own fertility and societies at least move toward population control. For reasons implied in our first scenario, this effort has gained most acceptance in the developing world and is today the major action toward population control.

Will it succeed? That depends upon how "success" is defined: almost certainly not by the austere definition of zero population growth by the end of the century (often advocated but nowhere officially accepted), perhaps yes by some less rigid definitions. But the real question is: what policy will succeed?—succeed, that is, under real-world political and administrative conditions and without violating humanitarian concerns on the way? Thus it may be the case, with population as with other great social issues, that what can be done is not "enough" and that what might be "enough" cannot be achieved.

Whatever its shortfalls, today's effort is considered even by its severest critics to be a step in the right direction—and it is a step that *can* be taken. Moreover, the effort contains within it not only the seeds of escalation but the fruits of such other values as improved health and greater personal freedom. Finally, to come full circle back to our scenario, such programs represent an institutionalized expression of abstract policy and a political commitment to "doing something about the population problem," and are valuable as such.

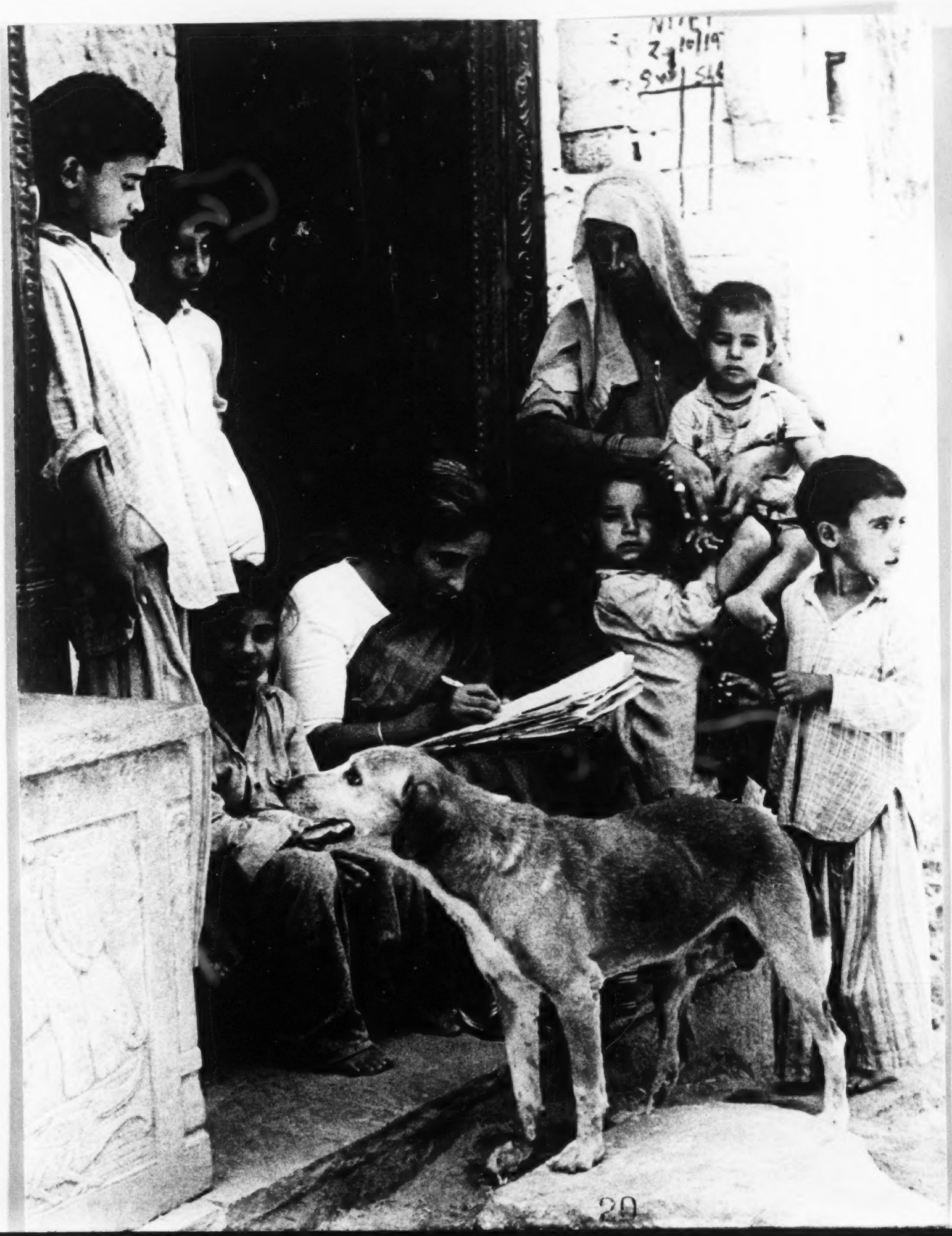
But whatever the outcome of the current debate on population policy around the world, it does seem clear that short of a great catastrophe the world is going to have to accommodate substantially larger numbers of people in the next decades. For example, if the replacement-sized family is realized for the world as a whole by the end of this century—itself an unlikely event—the world's population will then be 60 per cent larger, or about 5.8 billion, and due to the resulting age structure it will not stop growing until near the end of the next century, at which time it will be about 8.2 billion or about 225 per cent the present size. If replacement is achieved in the developed world by 2000 and in the developing world by 2040, then the world's population will stabilize at nearly 15.5 billion about a century hence, or well over four times the present size.

So the world is going to have to cope with a lot more people in the foreseeable future, and so are most countries. And the remedies appear to be limited, or at least not comprehensive and immediate. The overall picture is thus mixed: some disappointing signs, some hopeful ones. On a problem with this kind of history, difficulty,

pervasiveness, sensitivity, and magnitude, how could it possibly be otherwise? We need more of almost everything: knowledge and understanding, imagination and initiative, conviction and responsibility, organization and administration, funding and time. Perhaps most of all we need time—and in these days of instant reform, that often seems to be the one commodity in least supply.

Bernard Berelson,
New York City,
March 1971

Village interview—India



Demographic Division

The year witnessed the development of new programs in population education and in population policy. Interest in population policy formation, evaluation, and analysis has expanded as problems stemming from population growth, density, and urban concentration have come increasingly to the attention of political leaders and scholars throughout the world. The need for new knowledge and for technical guidance has increased proportionately and a major mission of the Division is to meet this need. As this report indicates, however, the traditional areas of Division activity were also continued during the year.

Institutional Development

The Division continued and expanded its efforts to establish or strengthen demographic programs in universities in the developing world. The form that the institutional development program takes depends upon the capacity of the universities and research centers to maintain their own nationals in the required research and training positions. Until such time as local personnel are trained to assume the required positions, expatriate advisory assistance is made available through Council support grants. When *local* personnel are available, institutional support may be carried out for some limited period by funding their salaries and research costs. As the staff costs become fully absorbed within the university or institute budget, additional support may be provided for specific research projects or for training programs through local fellowships.

The institutional development program consists of support to universities where Council advisors are assigned; to universities where general support is provided for research and training programs; and to universities or centers where continuing support is provided for research projects or graduate level training programs.

Eight of the twelve Division field staff personnel were assigned in 1970 to work with universities abroad as part of the institutional development program. In Thailand, Ralph Thomlinson and Lincoln T. Polissar worked with the staff at the Population Research and

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Philippine family planning worker

Training Institute, Chulalongkorn University, Bangkok. This Institute was established in 1966 with the joint support of the Thailand Government and the Council and has developed into a leading university-affiliated demographic training center in the developing world. In recognition of the growth of the program, the Thailand Cabinet officially approved the change in the legal status of the Center to that of Institute in 1970. The Institute now provides Master's level training in demography and sponsors a major social and demographic research program.

The balance of the Division field staff assigned to work with universities abroad is in Africa. Roushdi A. Henin and David Lucas were assigned to programs initiated during 1970. Mr. Henin introduced demographic training at the University of Dar es Salaam in Tanzania and Mr. Lucas began a new course in demography at the University of Lagos, Nigeria. To continue the demographic program begun in 1968 at Fourah Bay College, Freetown, Sierra Leone, Timothy Devis was assigned to Sierra Leone early in 1970. Continuing advisory services were made available through Stephen R. Taber at Makerere University, Kampala, Uganda; James C. Cramer, University of Nairobi, Nairobi, Kenya; and Gyorgy Acsadi, University of Ife, Ile-Ife, Nigeria.

In addition to the two new programs, commitments were also made to assist in the development of two additional programs through advisory services: at Ahmadu Bello University in northern Nigeria and at the Catholic University in Lima, Peru. These programs will be staffed with foreign advisors in 1971.

Advisors assigned to universities are responsible not only for teaching but also for assisting with the research programs of students and faculty at their universities. Many of the studies in which the field staff participates involve estimates of basic demographic change with particular focus on fertility measurement and the determinants of fertility. Such studies arise from the need to supplement largely inaccurate vital statistics. In Thailand, the Population Research and Training Institute, Chulalongkorn University, is carrying out a longitudinal study of demographic change; the first round of interviewing was completed in 1970. Evaluation of the vital registration system is being undertaken in Kenya; sample surveys in selected areas of Uganda are designed to examine correlates of fertility in an area of apparently rising fertility and in an area of moderately stable fertility; and researchers at the University of Dar es Salaam con-

tinue with an experimental population growth estimation survey.

New grants were made to several institutions for the support of continuing or new programs in population research and training. The programs include the demographic programs at Seoul National University, Korea and at the Center for Economic and Social Study and Research of the University of Tunis, Tunisia. Funds were made available to the University of Bombay, India to support a new professorship in demography to strengthen a program that previously included two Reader posts–one in sociology and one in economics. The Cairo Demographic Centre has completed the first two phases of its three-year research program, and with funds made available by the Council to the United Nations, an expert will be assigned to direct the third year's program that will emphasize demographic aspects of the labor force in the Middle East.

For those universities that have established their own staff and research programs, Council support continues through the award of grants to support on-going research programs or new research projects. At the Latin American Demographic Center (CELADE), Santiago, Chile, which is largely supported through United Nations funds, additional grants were made to continue the data processing and analysis required by the Latin American comparative fertility surveys. These surveys include studies in Mexico, Peru, Colombia, and Costa Rica.

Professional Development

During 1970, both the Population Association of America and the International Union for the Scientific Study of Population expanded their programs to strengthen demographic training and research. With partial support from the Council, the Population Association of America is printing and distributing a pamphlet on demography as a profession. This pamphlet will be made available to students in both secondary schools and colleges; it will furnish information for early counseling on career opportunities in the population field. In addition, the Association will utilize its Council grant to support the activities of a new committee, under the direction of Professor Dorothy Swaine Thomas, of the University of Pennsylvania, charged with examining and evaluating demographic training in American universities and colleges.

The International Union for the Scientific Study of Population has appointed a special committee on the teaching of demography,

under the direction of Professor David V. Glass of the London School of Economics. This committee—with members from the United Kingdom, India, the United Arab Republic, Japan, Uruguay, Denmark, France, and the United States—will develop guidelines for international demographic training. The Council is providing support for the activities of this committee as well as for the activities of other committees established by the Union.

An important part of the International Union for the Scientific Study of Population's program is the series of regional population conferences that provide opportunities for focusing on regional demographic problems and on the exchange of information. In support of this program, the Council contributed support to the Latin American regional meeting held in Mexico City, August, 1970, and provided funds for the Addis Ababa meeting of the organizers of the African regional meeting, scheduled to be held in Accra, Ghana in December, 1971.

Fellowships

The Division's fellowship program receives funds for the support of graduate and postdoctoral students of demography and related fields (primarily sociology, economics, geography) from the Rockefeller Foundation, for the support of students from the developing countries; from the Vivian B. Allen Foundation, for awards to Africans; and from the U. S. government, for awards to students from specified developing countries. Other sources of funds make it possible to support some North American and European students. During the past year, 56 fellowships were given to students from 26 different countries—18 students from Asia, 17 from Africa, 11 from the United States and Canada, seven from Latin America, and three from Europe. The name, nationality, field of study, and university of each of these Fellows is given between pages 83 and 90 of this report.

Summer Intern Program

The 1970 summer intern program brought nine graduate students to the Council to participate in research projects in collaboration with the professional staff. Seven students were assigned to the Demographic Division and two to the Research and Evaluation Unit of the Technical Assistance Division. The disciplines of sociology and demography were well represented, but students also came from

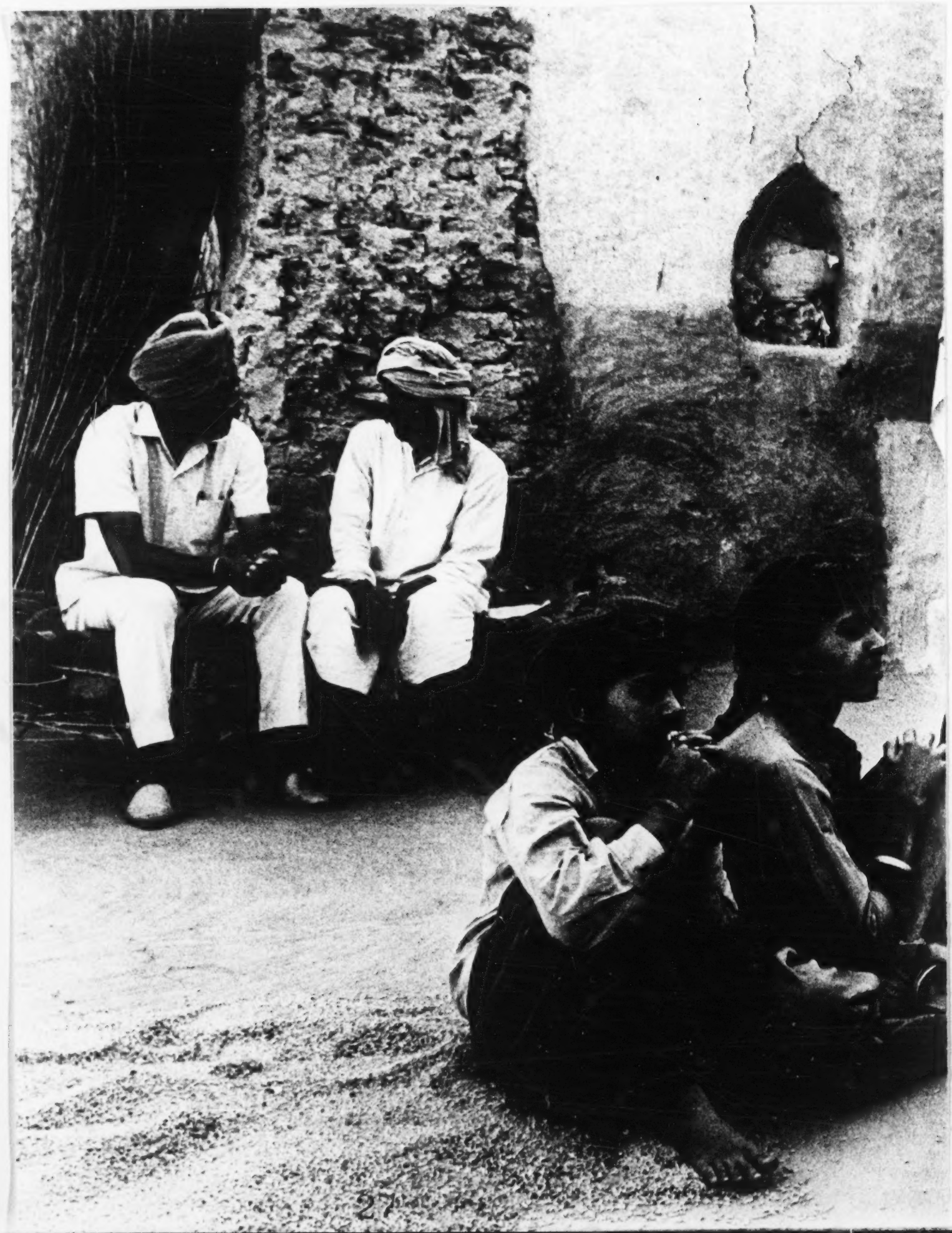
psychology, anthropology, and political science. This is in keeping with the Division's interest in promoting greater professional participation in the population field by students and scholars from other academic disciplines.

Students did research on a broad range of topics: the psychological aspects of modernity in relation to fertility change; analysis of the 1966-67 Moroccan Knowledge, Attitudes, and Practices (KAP) Survey; a review and synthesis of materials on population education around the world; a small-area analysis of Korean fertility; a comparative study of family planning programs in Iran and Turkey; a study of laws and government policies that directly or indirectly might affect fertility levels; a comparative review of Middle Eastern KAP studies; and a chronicle of events leading to changes in the New York State abortion law. The interns participated in several informal luncheon seminars, led by Council staff and other professionals, and visited other population and family planning organizations in the New York metropolitan area.

Population Education

The introduction of population awareness education programs into the formal school system is a fairly recent phenomenon in both the developed and the developing world, dating back no more than ten years. Today approximately twenty countries are in the process of initiating programs. Since the mid-1960s the Council has provided support to Professor Sloan Wayland of Teachers College, Columbia University, whose pioneering work has laid the foundations for a number of national programs around the world. In late 1969 the Council added a full-time staff person, Stephen Viederman, to develop a broad program in this field.

The program is intended to introduce materials related to population into the school curriculum in order to educate the next generation. Population education may be defined as the transmission of knowledge about and the ways of inquiring into population characteristics, population processes, and the causes and consequences of population change. The goal is to assist individual students to make reflective decisions about population matters, utilizing appropriate information and analytic skills. The population understanding that is developed through the program will enable future generations to perceive when and if the country has population problems, what the nature and magnitude of the problems might be, and what



policies might be necessary in order to deal with them.

The goals of the Council's program in population education are:

(1) to assist in the development of model programs;
(2) to support research related to the development of population education; and
(3) to form and participate in an international network of specialists interested in the field.

Program development activities were assisted in the United States, Chile, Colombia, and Tunisia in 1970. A group at the University of Delaware is developing curriculum materials for American elementary and secondary schools in the biological and social sciences. Elisabeth Mueller, now a Council advisor in Tunis, has been developing population awareness materials—both text and audio-visual—for a sixth-grade biology program; school testing of both programs is planned for 1971.

The Council provided three consultants to the Center for Training, Experimentation and Pedagogical Research, in Santiago, Chile, for its first seminar on population and education; it also provided support for the first Colombian Seminar on Population and Education, which brought together educators, population specialists, Church representatives, and governmental officials. The seminar concluded that "the educational system is not adequately preparing citizens of tomorrow. (Thus) the Faculties of Education should initiate action . . . so that pressure is exerted on the decision-making sector, leading to the ultimate institutionalization of the (population education) programs."

Under a grant from the Council to Teachers College, Columbia University, Professor Wayland and his associates are preparing a guide and reference book for educators and family planning administrators concerned with the development of population education programs in the schools. To be completed in 1971, the book will collate information from programs throughout the world in order to assist national leaders to formulate their own programs.

The Council sponsored an informal meeting in May so that the small group of Americans interested in the development of population education, both in the United States and overseas, could exchange ideas. In mid-summer a preliminary world review of population education programs planned and in process was widely distributed in mimeographed form. And in November a request for

more detailed information concerning programs was mailed to all countries in the world. The results of this survey will be published by the Council in 1971 in its Occasional Paper Series.

Determinants of Fertility

Social Determinants

Attempts to lower birth rates, particularly in the developing world, presume a basic understanding of the social and economic forces that promote high fertility. Such attempts require careful study of fertility trends in response to modernization and of deliberate efforts to lower fertility through national family planning programs.

A key tool in the achievement of both of these ends has been the large sample survey of fertility attitudes and behavior, and of knowledge, attitudes, and practice of contraception—the KAP study. The Division continued to encourage, support, and participate in KAP studies during the year. In the intramural research program alone, work was done on KAP surveys from Sierra Leone, Kenya, Tunisia, Morocco, and from the major cities of nine Latin American nations. At the same time, Division staff turned their attention to increasing the usefulness of KAP studies, now that they have become widespread and somewhat routine. This work took two directions: the inclusion of new content to make KAP studies more relevant both to program evaluation and to broader issues of population policy, and the encouragement of comparative studies of KAP results, taking advantage of the large backlog of KAP data, to test generalizations regarding family planning and fertility decline. In the latter direction, the Division agreed to assist the Roper Public Opinion Research Center at Williams College to assemble a large KAP data bank, with one hundred or more studies in comparable format, with full documentation, and readily available to any interested researcher.

An intensive research program by the Division on the causes of declining fertility in South Korea, under the direction of Thomas K. Burch, was begun during the year. Over the last decade, the crude birth rate in South Korea has fallen from 40–45 per 1,000 to approximately 30 per 1,000, in the face of urbanization, economic development, the rising age at marriage, the increased incidence of induced abortion, and a massive national family planning program. This program, one of the world's largest and most successful, has received major Council support and attention, so that it is natural that the Division should turn to an evaluation of its impact. The work will

focus on changes in the period 1965–1970, the period of maximum program achievement and of greatest fertility decline. Much of the analysis will be done in the Council's New York offices, but there will be active collaboration with Korean agencies and scholars, with the Council staff in Seoul, and with other key experts on Korean fertility and family planning.

Psychological Aspects

A new emphasis on psychological determinants and consequences of fertility was added to the Division's long-standing involvement in sociological and demographic research on fertility. Initial steps to bring about heightened awareness and understanding of psychological factors in fertility included publications, conferences, and research grants.

One major publication effort in this area was completed in 1970 and another was initiated. *Psychology and Population: Behavioral Research Issues in Fertility and Family Planning*, by James T. Fawcett, was published as an Occasional Paper and has been distributed to more than 8,000 psychologists and population researchers. This 155-page monograph provides a concise introduction to the population field for psychologists and other behavioral scientists and discusses priorities for needed psychological research on population problems.

To expand and deepen the coverage of Mr. Fawcett's introductory volume, the Division has commissioned the preparation by psychologists of review articles on twenty specific topics related to fertility and family planning. These collected papers will be published in a Council-sponsored volume tentatively entitled *Psychological Aspects of Population.*

A close and productive relationship has been established with the American Psychological Association Task Force on Psychology, Family Planning, and Population Policy. One Council grant to the Task Force made possible a one-day workshop attended by psychologists engaged in population research and another to the University of California, Berkeley, provided funds for a conference on the use of psychological assessment devices in population research.

Six research grants on the psychological aspects of fertility were made; the topics covered are indicative of the focus of this program. The American Institutes for Research in Washington, D.C. was given funds for a project under the direction of Dr. Nancy Russo that will assess attitudes toward family planning and motivations

for parenthood among Negro and white college students. The Roper Public Opinion Research Center at Williams College received a Council grant to compile an inventory of questions related to population control that have been asked in public opinion surveys. The resulting bibliography of survey data, extracted from more than eight thousand surveys conducted around the world over a period of thirty years, was published by the Roper Center in 1970. A grant to the University of California, Berkeley, provided partial funding for an intensive field study of social and psychological aspects of induced abortion in Italy. Attitudes toward and experience with abortion in an East Harlem community were the topic of a Council funded project carried out by the Mount Sinai School of Medicine in New York City by Dr. Roy Lerner. The Council also supported two projects at the University of Michigan investigating personality factors and psychosomatic responses related to the use of oral contraceptives.

Migration and Distribution

During the 1960s concern with population problems focused on high national growth rates in the developing world as barriers both to social and economic development and to higher levels of living. With international migration ruled out as a solution for all but a few small nations, attention centered on the reduction of birth rates through large-scale, voluntary family planning programs.

At the same time, interest has increased in the relatively neglected case of population mobility and the attending issues of urban concentration and distress. Events in recent years have underlined the importance of such a new emphasis. With the growing interest in the environment in the United States and other developed nations has come a recognition that population distribution and migration are also relevant to population problems, along with national rates of increase. In most of the developing nations, massive streams of rural-urban migrants continue, and cities grow at unprecedented rates; some social scientists believe that the Green Revolution will accelerate these trends. In short, where people live *within* nations is a problem and a policy issue, together with *national* growth or birth rates.

In keeping with these issues and research needs, the Division in 1970 supported five research projects on topics of migration and urbanization.

David Lucas, of the Division's field staff in Nigeria, has begun a study of migrants from Calabar in eastern Nigeria to Lagos, the federal capital. He is concerned with their assimilation to urban life, and particularly with the facilitating role of informal tribal "mutual aid" associations.

Brown University was given a grant to enable Professor Sidney Goldstein to continue studies of migration, urbanization, and fertility in Thailand, begun while he was on the Council staff in Bangkok. The current phase of his work involves use of census sample tape from the 1960 Thai Census to study socioeconomic differentials of rural-urban migrants. This is essentially base-line research, which looks to deeper analysis in the future, using data from the Council-supported national longitudinal survey of social, economic, and demographic change in Thailand.

On a different but complementary intellectual front, a grant to the University of Pennsylvania will support the work of Professor Ralph Ginsberg in the development and testing of a mathematical model of migration and similar mobility processes. Past empirical work has shown that moving is in part inversely related to duration of residence, and that high rates of migration in any given time period may reflect frequent moves of a minority, rather than movement widely dispersed throughout the total population. A small number of researchers has done promising work expressing these phenomena, using modern probability theory. Professor Ginsberg hopes to build on this work and to test the predictive value of his model, using data from the Swedish population register.

A two-year grant was awarded to the Center for Social Studies of the Torcuato di Tella Institute, Buenos Aires, for a study of urbanization in Argentina from 1870 to 1970. The study will combine the demographic, economic, and geographic perspectives, since actual trends will be related to such factors as major topographical features of the land and the distribution of resources. A previous grant to this institute resulted in the monograph *Migraciones en la Argentina: Estudio de Las Migraciones Internas e Internacionales, Basado en Datos Censales, 1869–1960*, by Sulma L. Ricchini de Lattes and Alfredo E. Lattes, published in late 1969.

A one-year grant was awarded to the University of Dar es Salaam for a study of the causes and consequences of internal migration in Tanzania. The principal investigators are Professor Claes-Frederik Claeson, a Swedish geographer attached to the Bureau of Resource

Assessment and Land Use Planning of the University, and Mr. Bertil Egero, a Swedish demographer attached to the Central Statistical Bureau of Tanzania. The study will examine materials from recent censuses to chart patterns of migration, the characteristics of migrants, the social and economic characteristics of sending and receiving areas, and likely future trends of internal migration.

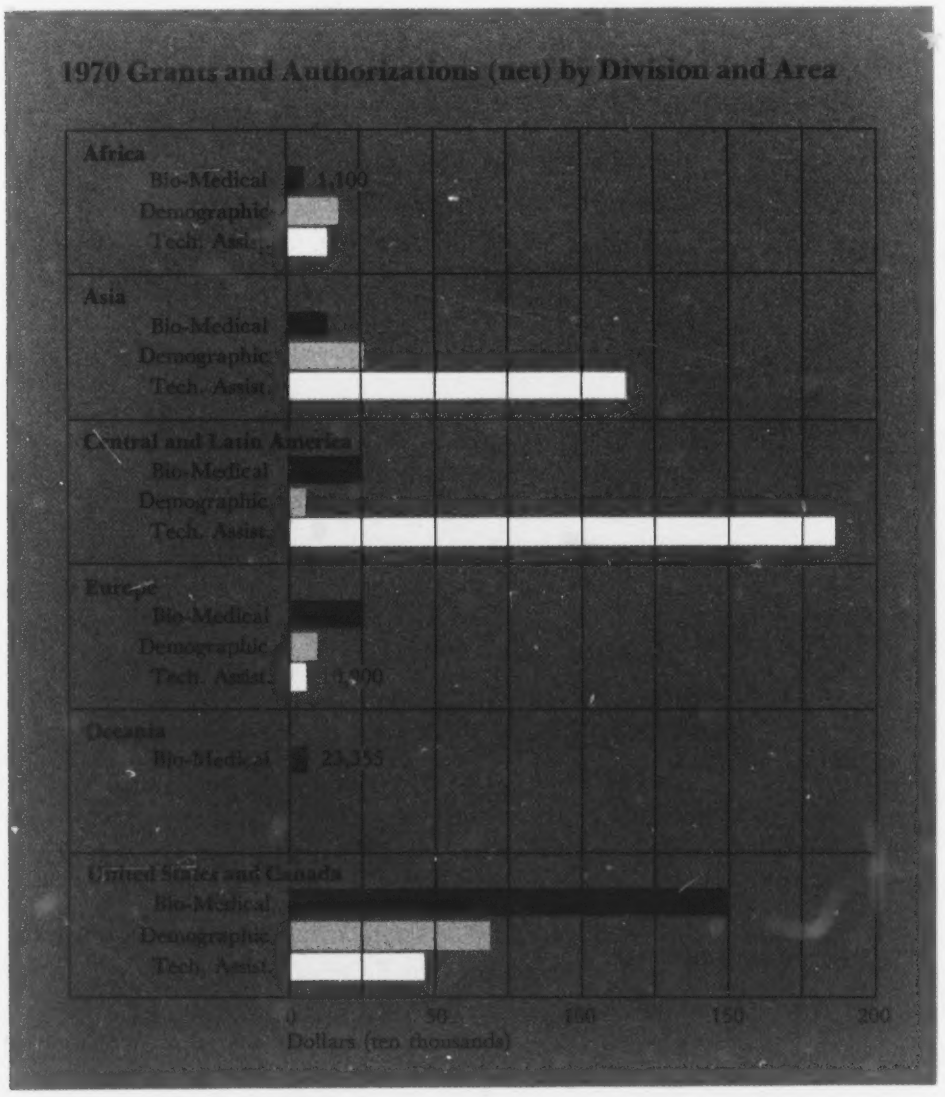
Measurement and Evaluation

The Division's program in the area of measurement and evaluation has three broad objectives: fostering the widespread use of sound measurement practices in demographic studies and related population research; the development of new techniques of demographic measurement and analysis; and the evaluation of population data currently used by demographers, economists, and other social scientists.

Most of the world's population lives in countries for which only outdated or unreliable information about the rate of population growth exists, and where current fertility and mortality levels are even less accurately known. To deal with this basic gap in knowledge the Council has, over the past few years, under the direction of William Seltzer, helped establish a series of population growth estimation studies in various countries in Africa and Asia. (The studies involve the use of two independent collection systems to obtain reports of vital events, case-by-case matching of the reports of each system, and a statistical adjustment for missing reports based on the match rate of either source.) During the past year Division staff participated in the planning work for proposed studies in Morocco and Sierra Leone, and provided short-term consultative services in connection with on-going population growth studies in Algeria, Pakistan, and Tanzania. In addition, a grant was made to the Central Statistics Office, Government of Sierra Leone, to help finance a study involving the estimation of basic demographic data in conjunction with a phased expansion and upgrading of that country's civil registration system. The Council authorized and a search was begun for an advisor to work with the Central Statistical Office, Government of Pakistan, on the improvement of its Population Growth Survey. Beyond direct assistance on individual population growth studies, the Division organized and conducted a seminar, "Designs for Estimating Population Growth," in May, and staff and Council consultants made special presentations on this topic at

international training workshops in Brazil and Korea.

Paralleling its work on population growth studies, the Division has supported an extensive program in the field of knowledge, attitudes, and practice (KAP) surveys. These studies range in nature and purpose from public opinion polls designed to give a rough indication of the level of public interest in family planning, through more analytical studies designed to broaden our understanding of the determinants of fertility behavior, to evaluative studies designed to assess the methods and accomplishments of family planning programs. In addition, KAP surveys have been widely used, in this country and abroad, as training exercises.



In order to help improve the overall quality of KAP studies and to increase their potential usefulness by creating a more standard measurement tool, Division staff prepared and produced *A Manual for Surveys of Fertility and Family Planning: Knowledge, Attitudes, and Practice*, which was published in March 1970. This manual, containing contributions by John C. Caldwell, Harvey M. Choldin, Louisa F. Noé, David L. Sills, and Frederick F. Stephan, describes how to plan, implement, and analyze such studies. It also contains model questionnaires developed by the Council and by the International Union for the Scientific Study of Population. To date, 2,500 copies of the manual have been distributed throughout the world.

In addition to giving consultative or financial support to a small number of new KAP studies, the Division staff assisted in the tabulation and analysis of the descriptive data from KAP studies conducted in Kenya, Morocco, Sierra Leone, and Tunisia; through a grant it also assisted in the tabulation and analysis of an urban KAP study that was done in Lima, Peru.

During the past year the Demographic Division organized a one-day seminar on KAP studies to help clarify the objectives, uses, and limitations of these studies. Reflecting the concern raised at the seminar of the need for a more thorough review of the reliability and validity of responses to individual KAP studies, a major grant for a new KAP study in Niger, West Africa has a substantial self-evaluation component.

Population Policy

The activities recounted above are all relevant to the field of population policy. The Division's direct program of research into and analysis of population policies revolved in 1970 around six topics: policy formation, the economic determinants and consequences of population growth, political demography, the interaction of population and the environment, law and population, and ethical issues.

Policy Formation

An important national policy decision in the field of population is to support family planning activities. By the end of 1970 some 42 out of 102 developing countries had taken this step. The historical and social origins of these programs are of considerable interest to the analyst of population policy.

During 1970, Professor John C. Caldwell, formerly the Division's Regional Representative in Africa and now Professor of Demography at the Australian National University, continued his analysis and writing up of data gathered in 1969 under Council auspices in Korea, Taiwan, Singapore, Malaysia, Pakistan, and Turkey. Professor Dov Friedlander of the Hebrew University of Jerusalem also continued his analysis of how population policy is being formed in Israel in the face of sharp differences in birth rates among the various ethnic and religious subgroups of the population.

Knowledge of the kind of population growth that can be expected is a prerequisite to the formation of population policies. Accordingly, in a project directed by Tomas Frejka, the Division is attempting to define the limits within which future population growth might occur, for the world as a whole, and for about 60 countries and 30 geographical regions. The information derived from the analysis focuses not only on the growth of total numbers but also suggests the interrelations of various demographic measures—population size, crude birth and death rates, rates of growth, reproduction rates, and the age structure. These data make it possible to visualize the consequences—in population growth—of the adoption and realization of population policies, as well as the consequences of having no policy.

Two new grants for research on policy formation were made in 1970. The Institute of Commonwealth Studies, University of London, is undertaking a study of the political and organizational aspects of family planning programs in the developing countries of the Commonwealth, under the direction of Professor T. E. Smith. This research is supported both by the Council and the Social Science Research Council of the United Kingdom. Under a Council grant to The Johns Hopkins University, School of Advanced International Studies, Emiline Ott is now undertaking a study of the role played by the Colombian Association of Medical Schools (ASCOFAME), a major Council grantee in Latin America, in the development of a national population policy and family planning program in Colombia.

In Algeria, Thailand, and Ceylon, Division field personnel have been advising these governments on the demographic aspects of economic planning and population policy formation. In Algeria, Philippe Bourcier de Carbon, working at the Secretariat d'Etat au Plan, prepared an extensive series of population projections in preparation for the next Five Year Plan. In Thailand, Gavin W. Jones served throughout 1970 as an advisor to the National Economic

Development Board, where he has been given the responsibility for developing national population projections and has assisted in drafting the statement of national population policy subsequently approved by the Thai Cabinet. In Ceylon, Mr. Jones collaborated with officials of the Ministry of Planning and Employment on several studies of the country's population growth. These have shown the effect of differing rates of growth on the economic development of Ceylon and their impact on specific sectors of the economy such as employment, housing, and education.

The impact of population growth upon educational institutions and costs was studied under two Council projects. Mr. Jones is nearing completion of a book of case studies of Ceylon, Pakistan, and Korea. Under a 1969 Council grant to the International Institute for Educational Planning, a UNESCO-established organization located in Paris, a series of country reports on the impact of population growth on the costs of primary education and teacher training was prepared and distributed in draft form in 1970. These reports, on Ceylon, Colombia, Tanzania, and Tunisia, will be followed by a summary volume on methodologies for assessing the impact of changes in the youth population upon educational development.

In order to introduce into the American educational system some concrete experience with policy planning, the Council supported the development of a population policies game at Cornell University under the direction of Professor Allan G. Feldt of the College of Architecture, Art, and Planning. Although the game is designed for use in American colleges, it may be applicable in other settings both here and abroad. The basic setting of the game will be a single fictitious country divided into regions. The players compete with others by allocating resources in order to enhance the economic and demographic development of these regions.

The Economic Determinants and Consequences of Population Growth

In addition to its advisory services in Algeria, Thailand, and Ceylon, the Council has supported research into the economic consequences of population growth and/or limitation. A grant to the University of Michigan has enabled Richard E. Bilsborrow to undertake, by means of cross-sectional analysis, an econometric study of the effects of population growth on economic development in 35 developing countries. At Hong Ik University in Seoul, Korea, Park Rae-Young has carried out a study of the impact of popu-

lation growth on economic development in Korea. And at the University of Nairobi, Kenya, the Division has supported the publication of a book on population growth and economic development in Tropical Africa, based on a seminar held there in 1969.

The three grants described above were in support of research that traces the macroeconomic impact of population growth. Under grants from the Council and the Organization for Economic Cooperation and Development (OECD), Professor Theodore K. Ruprecht of Humboldt State College, Arcata, California, is studying the microeconomic effects of family planning. Using a simulation model, and data from surveys carried out in Africa and Asia, Professor Ruprecht is attempting to demonstrate how different patterns of demographic behavior (age at marriage, number and spacing of births, mortality levels) affect over time the economic production and consumption patterns of the individual family.

In order to encourage communication on population among economists and between economists and demographers, a grant was made to the National Bureau of Economic Research in New York City to convene two conferences on the economic determinants of fertility, one in 1972 and a larger one in 1973. The Council will co-sponsor these meetings.

Political Demography

Since the adoption of population policies is a part of the political process, and since population policies often have political consequences, the Council has sought ways of engaging the interest of political scientists in the study of population. In October a two-day conference was held at the Council, chaired by Professor Karl W. Deutsch of Harvard University and attended by some 35 political scientists and demographers.

Law and Population

Scholars in the disciplines traditionally concerned with population are becoming increasingly interested in the law as it may affect population behavior. At the same time, legal scholars are beginning to show great interest in population problems. The Council's program in law and population, under the direction of Hugo Hoogenboom, is intended to help define the area where population and law intersect, and to support research in this area, especially into the role of law as an instrument of population policy.

Four projects in the field of law and population were supported by the Division in 1970. A grant to the School of Medicine at the University of Hawaii is supporting a study of the chronology, tactics, and issues involved in the passage of liberal abortion legislation in the Hawaiian legislature in 1970. In New York State, where similar legislation was also passed in 1970, a comparable study is being undertaken, with Council support, by Ben White of the Department of Anthropology, Columbia University. Mr. White interviewed both legislators and leaders of various organizations having positions on both sides of the issue, with the intent of reconstructing the political process that led ultimately to passage of the legislation.

Two supported projects are related to the consequences of the legalization of abortion in Eastern Europe. First, at the University of Illinois at Urbana-Champaign, Professor Peter B. Maggs of the College of Law is undertaking a computer simulation of the effects of legal policy upon the rate and nature of population growth in Bulgaria, Romania, and the U.S.S.R. Second, a monograph by Henry P. David of the American Institutes for Research, *Family Planning and Abortion in the Socialist Countries of Central and Eastern Europe: A Compendium of Observations and Readings*, was published by the Council. This volume summarizes current knowledge about population trends, family planning, and abortion activities in the U.S.S.R., Bulgaria, Poland, Hungary, Romania, Czechoslovakia, Yugoslavia, the German Democratic Republic, and Albania.

A symposium on the social and legal implications of national population programs and policy was held with partial support from the Council at the Villanova University School of Law in April. The proceedings of the Symposium, constituting six articles by lawyers, doctors, and demographers, was published in the summer 1970 issue of the *Villanova Law Review*.

The Environment-Population Relationship

During the past year an important debate has gone on, primarily within the scientific community, on the nature and the extent of the environmental impact of current rates of population growth in the United States and other economically developed nations. The controversy has generally found social scientists, chiefly demographers and economists, arguing that the environmental impact of population growth in the United States today is small, and that economic and technological factors have a more significant impact upon

environmental quality. In contrast, a number of natural scientists, primarily biologists and ecologists, view population growth as an important cause of environmental deterioration in the United States. A semi-popular manifestation of this latter view has been the interest in and discussion of "zero population."

To help clarify some of the issues involved in this debate, the Council sponsored in March an informal two-day meeting of leading demographers, ecologists, biologists, and physical scientists, chaired by Professor Gilbert F. White of the University of Colorado, a Council Trustee, on the general topic of "Scientific Foundations of Population Policy with Particular Attention to Population Growth and Distribution in the United States." The meeting led to a candid exchange on the issues involved, and generally indicated that while there are some disputes about "facts," most differences on this topic arise from the way in which facts and uncertainties are interpreted.

In order to develop more certain scientific knowledge about the possible impact of various population variables on the environment, the Council agreed during the year to hold a series of joint seminars in 1971 with Resources for the Future, a Washington-based foundation long-active in the resource and environmental field. A major objective of the seminars will be the development of a series of specific research proposals on key aspects of population-environmental interactions.

Ethical Issues

A Council-wide seminar on ethical issues in population policy and programs, attended also by representatives of other organizations, concluded in mid-May. Led by Daniel Callahan, the seminar series began in October, 1969; a total of 23 two-hour sessions was held. During the spring, various proposals for controlling population growth were examined in a systematic way from an ethical perspective. Among the seminars that drew an unusually large number of staff members were those on the ethics of bio-medical research, the changing roles of men and women, the emergence of new life styles, and the relationship of the women's liberation movement to population control. A report on the major ethical issues in the field of population, with recommendations for future Council programs in this field, was completed by Mr. Callahan prior to his leaving the Council staff at the end of the summer and will be published as an Occasional Paper in 1971.

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Graph construction at the Council computer facility

Bio-Medical Division

A New Direction

Twice before in the Council's history, major changes occurred in the course followed by the Bio-Medical Division. In 1956 the Division, previously limited to a program of grants and fellowships, developed laboratory facilities at what was then the Rockefeller Institute and later became the Rockefeller University. It was not then intended that this modest laboratory would carry the main responsibility for the Council's contribution toward new understandings of the reproductive process, or new methods of fertility control. For these objectives, the Council's extramural program remained primary, but the addition of an intramural research program influenced considerably the Division's staffing pattern. It meant that we were able to recruit laboratory scientists, representing many disciplines, with a common focus of interest in reproduction research. Ten years later, in 1966, the Division was expanded in order to undertake more direct action in the development of new methods to regulate fertility. This meant the addition to the staff of clinical researchers and scientists experienced in goal-oriented research and development. Our grant program became more active in seeking projects geared to pre-defined objectives, rather than reactive to the requests submitted by scientists around the world. It was evident in following years that a non-profit research group can play a significant role, supplementing private industry, in the development of new contraceptive methods. We sought to develop an improved intrauterine device, and to test the feasibility of an entirely new method of contraception – a subdermal capsule – based on work originating in our laboratory.

By the beginning of 1970 we had added a third goal-oriented program of major scope – a search for a fertility control method based on luteolytic or contragestational activity that would provide a simple means to initiate a new ovarian and endometrial cycle, whether or not the preceding cycle had been fertile. A contragestational method of this nature could be used each month to assure a

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In the Bio-Medical Division laboratory

regular menses, or only on those occasions of a missed period suspected to be caused by a conception.

As we entered 1970, then, three of our top priorities toward important improvements in contraceptive or contragestational technology were being tracked, but our analysis of the field in general, suggested that there were several others that warranted rapid evaluation – an effort beyond the scope of our financial resources or of our limited staff size. During the year, we consulted with colleagues in many countries, seeking their views as to how the Council could best serve the field with respect to the development of new contraceptives. Should we continue to increase the size of our staff, adding a team of scientists and administrators to pursue each new area of special promise? Should we seek to establish a new operating group, independent of, or subsidiary to the Council, that would subsume these functions with financial support mustered for it by the Council? Encouraged by the guidance of our many friends, we planned our new course. Rather than create a new administrative unit, internally or externally, the operational responsibility for the expanded effort would remain within the Council's Bio-medical Division; the program would be international both in activities and personnel; it would concentrate on contraceptive leads that would not otherwise be developed.

In December, 1970, we convened an international team of clinical investigators who work in the field of contraception. Out of the deliberations of this group arose the Population Council's International Committee for Contraception Research (ICCR). The function of the ICCR is to identify the areas of special promise in contraception research, to determine whether these leads will require special attention in order to be properly and rapidly evaluated and, if so, to carry forward these investigations. This is achieved by research in the clinics and laboratories of ICCR members and by the award of grants and contracts to other investigators for specified projects. ICCR members accept the responsibility to plan, initiate and monitor the work required for each lead. Thus, primary responsibility is de-centralized, internationalized, and placed in the hands of the specific investigator most qualified and experienced in the field associated with a particular lead.

ICCR members are physicians with full-time academic careers in their home countries, who devote a major portion of their time to this effort as consultants to the Population Council. An essential

principle of the ICCR is that leading investigators throughout the world can participate while remaining at their home institutions where they can contribute to the field most effectively. Thus, the program can proceed with a group of the field's most talented investigators from several countries. *Dr. Elsimar Coutinho, University of San Salvador, Bahia, Brazil*, will concentrate on the development of subdermal implants for women. *Dr. Tapani Luukkainen, University of Helsinki, Finland*, will guide efforts toward the development of a pre-coital and a post-coital pill. *Dr. Julian Frick, University of Innsbruck, Austria*, will be in charge of studies on both a surgical and an hormonal method to control fertility in men. *Dr. Elof Johansson, Uppsala University, Sweden*, will direct the program toward developing a contraceptive pill based on once-a-month application, or to be used only at the time of a late period. *Dr. Anibal Faundes, University of Santiago, Chile*, will proceed with studies on a contraceptive pill that requires a once-a-week regimen. *Dr. Daniel Mishell, Jr., University of Southern California, U.S.A.*, will direct the development of a long-term injectable contraceptive and a contraceptive vaginal insert based on progestin action.

Each will initiate studies of effectiveness, safety and mechanism of action of the method for which he has primary responsibility. He will plan with other members of the Committee additional research that should be done, using the combined facilities and special procedures in this international network of clinics and laboratories. Beyond this, he will be authorized to initiate grants and contracts with investigators throughout the world, to assure that the potential method receives a thorough and comprehensive evaluation for both effectiveness and safety. The Council will provide the necessary administrative support to permit ICCR members to function effectively and efficiently. It will undertake license negotiations and research agreements with industry, when required. The Council will make available for the work of the ICCR the resources of its laboratory, biometrics unit and primate facility, and will award the grants and contracts that are required for lead tracking by ICCR members. The Council will assure that each successful lead is brought through all final stages of product development and distribution.

With this program, we have embarked on a direction of activity which will, perhaps, serve as an important model for international collaborative efforts on other problems in the population field as well as in other areas of development.

The Clinical Program

Studies with the endouterine Copper T, a contraceptive device developed by a team headed by Dr. Howard Tatum of the Council's staff and Dr. Jaime Zipper of the University of Chile, proceeded with considerable success during 1970. Early in the year, the results of clinical trials in Chile established that a T device carrying a copper filament coiled on the vertical arm to provide 200 mm^2 exposed surface area of copper performed with a level of effectiveness to warrant more extensive field trials. A cooperative program was initiated in nine clinical centers in the U.S. and Canada. The data are collected and analyzed by the Bio-Medical Division's biometrics unit. The data accumulated by the end of 1970 substantially confirmed the initial clinical experience in Chile. On the basis of studies involving 800 women for 2787 months, a pregnancy rate of 1.0, an expulsion rate of 3.6 and a removal rate of 4.4 were revealed. Thus, a six-month continuation rate of 91.0 prevailed. These studies are, of course, continuing.

By the end of the year, arrangements were made for the initiation of limited field trials, with close evaluation, in a number of countries. The list includes India, Pakistan, Tunisia, South Korea, Taiwan, the Philippines, Colombia, United Arab Republic, Kuwait, Israel, Nigeria, Sweden, Finland and the United Kingdom. To prepare the necessary supply of devices for this phase of field trials, automated technology was developed to permit inexpensive, large-scale production. Manufacturing and packaging contracts were arranged. Thus, as 1970 ended, the stage was set for the TCu 200 to pass from limited clinical trials in Chile and the U.S.A. to more extensive field trials throughout the world.

The Council's program toward the development of subdermal contraceptive implants continued during the year. A meeting of investigators from the U.S.A., India, Brazil and Chile was held in October, 1970, and the decision was made to extend studies with implants containing megestrol acetate, while efforts continued to establish an effective anti-fertility dose with implants containing d-norgestrel. The megestrol acetate implants, the first to be studied, had performed satisfactorily in the view of the clinicians who had used them. The single insertion of five implants, releasing approximately 125 micrograms daily of the progestin, assured a full year of contraception. Menstrual disturbances were experienced, but less frequently than in studies involving the oral administration of the

same hormone. By the end of the year, the Indian Council of Medical Research had approved the extension of trials in India and requested a large supply of implants for these studies.

The Laboratory Program

The laboratory of the Bio-Medical Division has developed into one of the major research facilities in the world concentrating on problems of reproductive physiology. The projects range from the very basic to the highly applied. The range of experimental animals used is also broad, including South African frogs, African weaver finches, six species of laboratory rodents, monkeys and baboons, as well as human beings. Dispersed among five buildings on the campus of the Rockefeller University, the laboratories, offices and animal quarters occupy 8,200 square feet of floor space. In addition, in July, 1970, a satellite laboratory was occupied by the Division at the Walker Laboratory of the Sloan-Kettering Institute, at Rye, New York. At the end of 1970, the total laboratory personnel of 72 included 29 scientists at the doctoral level, 20 staff members and nine post-doctoral Fellows from six countries. The scientific disciplines represented include classical embryology, biochemistry, immunology, organic chemistry, physiology, experimental endocrinology, veterinary medicine, oncology and obstetrics and gynecology. The presence of this diverse group of working scientists in the Division is a unique and important feature of the Council. It enables us to keep in touch with reproduction-related work in this broad spectrum of the biological sciences.

Professor Emil Witschi is investigating the causes of embryological imperfections leading to fetal abnormalities. His experimental work with amphibia and mammals has led to his theory that the major cause of fetal abnormality is the fertilization of a damaged egg, having either chromosomal or cytoplasmic deficiency. He has developed the concept of egg "overripeness" in either the pre-meiotic or post-meiotic stage.

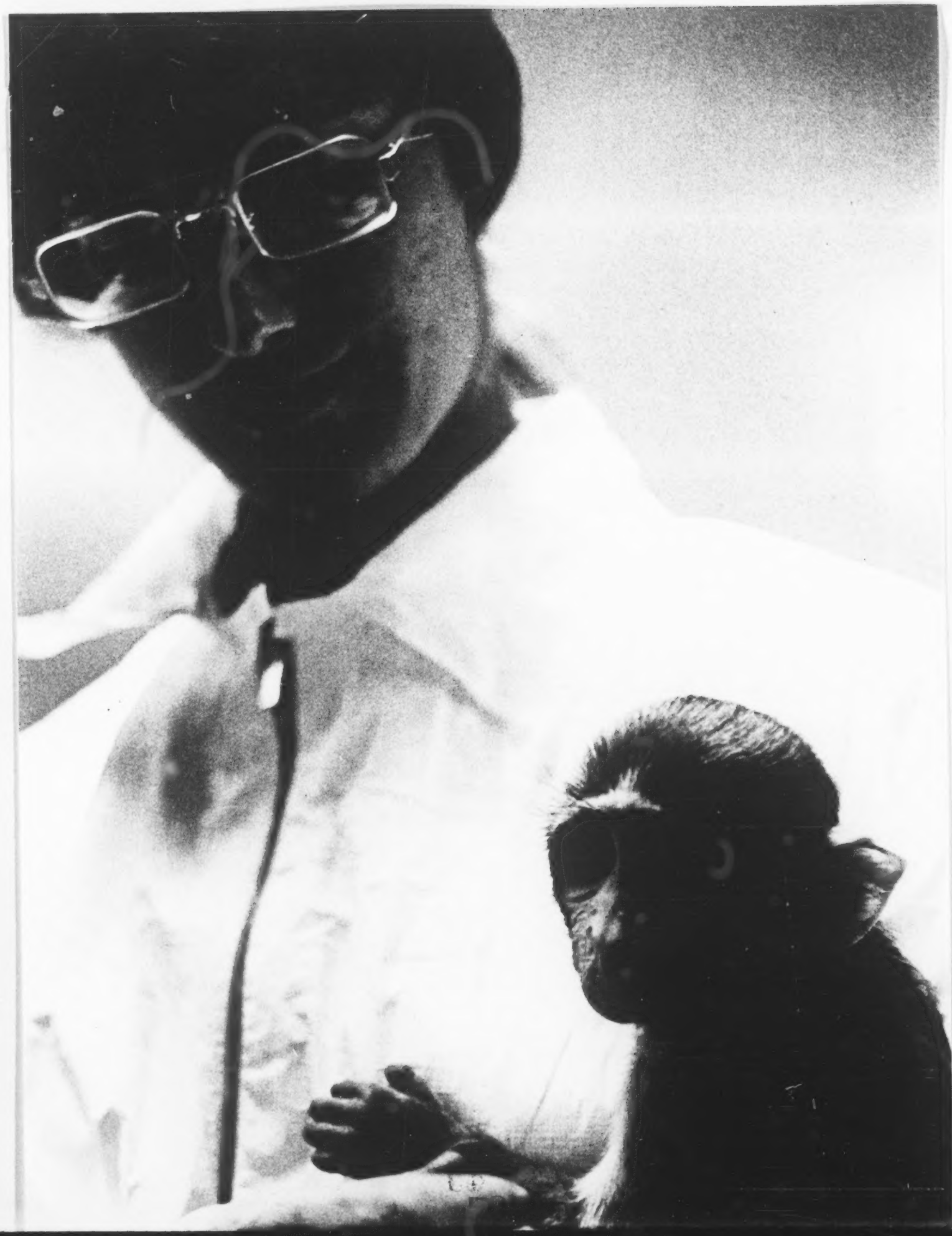
Dr. Howard Tatum is proceeding with the development and clinical testing of the endouterine copper T, a contraceptive device with a superb record of performance. He is directing, also, an international cooperative study to evaluate the clinical sequelae of post-abortion insertion of an intrauterine device. Dr. Tatum's research includes studies of the mechanism of contraceptive action of copper, and the clinical effectiveness of Silastic implants containing progestin.

Mrs. Anna-Riitta Fuchs is attempting to elucidate the hormonal and mechanical factors that regulate uterine contractility. Her work is done with rabbits, rats and human subjects. She has investigated the normal pattern of uterine contractility during various physiological conditions such as copulation, gestation, parturition and the puerperium. The role of neurohypophysial hormones in parturition has been clarified by determining the oxytocin and vasopressin content of the posterior hypophysis of rats before, during and immediately after parturition. Her program also includes study of the effectiveness of prostaglandins in the interruption of gestation in rats and monkeys, and the study of the uptake of radioactive progesterone in the uterus and in the brain of rats and rabbits.

Dr. Kenneth Laurence is investigating several immunological aspects of reproduction. He has analyzed the mechanism of immunologically-induced aspermatogenesis in guinea pigs, and the effect of gonadotropin immunization in male or female animals. He has described specific enzymatic steps in ovarian or placental steroidogenesis effected by antibodies to luteinizing hormones in the rat. His work has included, also, the development of antibodies to the enzyme 20-alpha-hydroxy-steroid dehydrogenase, and has thus opened a new and exciting approach to immunological interference with gonadal function.

Dr. Sheldon Segal is investigating the effect of estrogen stimulation on the quantitative and qualitative aspects of RNA synthesis in the rat uterus. The biological activity of uterine RNA is an area of special interest in this program. In addition, he is coordinating collaborative efforts to develop Silastic implants for contraception in men or women, including both laboratory and clinical studies. His program includes efforts to impair spermatogenesis in the rhesus monkey by pharmacologic agents or to interfere with the function of the corpus luteum.

Dr. Samuel Koide is carrying out a basic biochemical program in molecular biology, uterine physiology and placental physiology. Together with *Dr. L. Burzio*, he has demonstrated that poly (ADP-rib) formation inhibits DNA synthesis of rat liver nuclei and chromatin. Isolated uterine nuclei do not respond similarly. The administration of actinomycin D and nicotinamide blocks DNA synthesis in the uterus, stimulated by estradiol. These results suggest that the induction of DNA synthesis by estrogen is dependent on RNA synthesis. In other work, in collaboration with *Dr. Y. Tsong*, he has



identified a highly polar metabolite of cortisol that may provide a clue toward understanding the mechanism of action of this steroid. Other work by this group includes the identification of gonadotropins isolated from human term placenta, and the influences of several hormones on the response of the uterus to estradiol. The influence of insulin, growth hormone and thyroxine on the RNA synthesis of mouse uteri is also under investigation.

Dr. Christopher Tietze directs a number of evaluations on contraceptive methods and scientific aspects of abortion. He has initiated the Joint Program for Study of Abortion. Sixty teaching hospitals in 18 cities are cooperating in this study to establish much-needed baseline data on medical sequelae to surgical abortion. The objective is to concentrate on early morbidity and mortality, based on the aggregate experience of an estimated 40,000 abortions. Dr. Tietze is also evaluating new forms of intrauterine devices.

Dr. Roy Hertz is undertaking primate studies relating to contraceptive development and maintenance of pregnancy. This includes work with steroids and non-steroidal agents interfering with corpus luteum function or survival. He is developing a radioimmunoassay for monkey chorionic gonadotropin in order to establish by a sensitive method, the circulatory and excretory patterns of this hormone. Dr. Hertz's program includes as well, clinical and biological aspects of tumors of the trophoblast, and the role of metal chelating agents in implantation and pregnancy maintenance.

Dr. Fred Kincl (resigned September, 1970) carried out fundamental studies with rats on the role of the pineal gland in reproduction and behavior. This work revealed that the pineal is involved in controlling the diurnal pattern of activity characteristic of caged rats. In addition, Dr. Kincl continued work on the release of steroids from Silastic membranes using *in vitro* measurements. His program included studies of the effect of neo-natal androgen treatment on the pathway of steroid metabolism in the rat.

Dr. Kalyan Sundaram established a radioimmunoassay for plasma estradiol determination. The method was used in female monkeys to determine the day of ovulation. He also established a method for the determination of plasma progestins which can be used to confirm pregnancy in the monkey within twenty days after fertilization. He is using these procedures to evaluate ovarian function in the adult rat neo-natally treated with androgen to cause sterility.

52 *Dr. Alvaro Cuadros* is studying the histology of the reproductive

tract of rats, rabbits, monkeys and human subjects in the presence of metallic copper alone or in combination with polyethylene intrauterine devices. He has observed an accumulation of polymorphonuclear leukocytes in the endometrial stroma, glands, surface epithelium, endometrial secretions and on to the surface of the intrauterine devices. He is also studying ultra-structural changes in the uterine surface epithelium in response to copper.

Dr. Chin-chuan Chang is studying the mechanism of action of intrauterine copper in preventing fertility. He is carrying out, also, studies on the potential teratology of intrauterine copper in rats, hamsters and rabbits. Dr. Chang's program includes study of norgestrel-containing Silastic implants, control of prolactin secretion in the rat, and the effect of antibodies to luteinizing hormone on blastocyst survival, decidualization and implantation in the rat.

Dr. Gopi Nath Gupta is studying the diffusion of d-norgestrel, a potent progestin, through Silastic, *in vitro* and *in vivo*, as well as the tissue distribution and metabolic fate of this compound in rats, mice and monkeys. To pursue these studies he has synthesized H^3-d-norgestrel of very high specific activity. Dr. Gupta has also developed new simplified procedures for the scintillation counting of H^3 and C^{14} in biological liquid and solid samples. He has established gas chromatographic methods with flame ionization and electron-capture detectors for determination of steroid metabolites at the nanogram and picogram levels.

Dr. Ashley Brinson and *Dr. William Hood* are the veterinarians responsible for the clinical care of the primate colony, which houses more than 300 rhesus monkeys and a small group of baboons. In addition, these scientists have developed the procedures for establishing pregnancies in monkeys by either artificial insemination or timed matings. They collaborate with other staff members in experimental projects involving primates.

Dr. Theodore Jackanicz is studying metabolic phenomena in preimplantation blastocysts obtained from rabbits, with emphasis on the *in vitro* synthesis of steroids and fatty acids from C^{14} acetate. Both progesterone and estrogen were found to effect steroid production by rabbit blastocysts. Rabbit plasma and uterine fluid from pregnant animals have been compared for estrogen content, by radioimmunoassay.

Dr. Kazuya Mikamo is doing cytogenetic and anatomical studies of human conceptuses, particularly in cases of post-contraception preg-

nancy. He is studying the etiology of triploidy in man, including the relationship between triploidy and overripeness of oocytes. His work includes the study of sex ratio of human abortion material. These observations reveal that, contrary to prevailing views, the younger the embryonic age, the lower the sex ratio.

Dr. Linda Atkinson and *Dr. Fred Moo Young* joined the laboratory during the latter part of 1970. Dr. Atkinson is developing column chromatography techniques for separation of steroids, and will continue her work on radioimmunoassay of gonadotropins in primates. Dr. Moo Young is establishing both colorimetric and atomic absorption spectrometric methods for the determination of plasma and tissue copper levels.

Miss Lenore Southam is undertaking the rearing of monkeys born in the primate colony. Her group of nearly 50 infant monkeys, ranging in age from newborn to two years, is the subject of careful evaluation of weight and growth curves, and other signs of maturation changes.

In describing the work of the laboratory staff, the identification of projects with particular investigators establishes the primary interests of each, but there is considerable collaboration within the group and, in fact, with colleagues in other laboratories.

The Grant Program

The Bio-Medical Division provided grants totalling approximately $2,150,000 to 130 investigators in 23 countries, during 1970. The availability of Council grants is valued by all reproductive scientists but it is of particular significance to non-American investigators in those countries that have a shortage of foreign exchange for the support of scientific research. Indeed, several Council grantees depend solely on the funds provided by the grants for the support of their research. Like the Council's intramural program, the grant program ranges from the very basic to the highly applied. One Italian investigator is provided with support to study steroid phosphates in amphibia, while another is provided with support to help develop a new contraceptive method. In Sweden, one investigator receives support for basic studies on the motility of human spermatozoa, while another is provided with support to evaluate means of halting corpus luteum function in early pregnancy. The several grants to Indian investigators cover work on IUD's in women, histochemical studies on the ovaries of the ground squirrel, pheromones in

mice, and for training in culdoscopic tubal ligation. The grant program had special significance for U.S. investigators during 1970, when a growing number of projects usually supported by the National Institutes of Health, were approved but not funded. Many of these investigators turned to the Population Council for support.

The Fellowship Program

The Bio-Medical Fellowship Program provides training opportunities to young scientists, usually from the developing countries. In 1970, Bio-Medical Fellows came from twenty countries. Of the 39 Fellows appointed, 28 came from Africa, South America and Asia. The others selected were from universities and hospitals of Eastern and Western Europe, and Australia.

During 1970, twelve Bio-Medical Fellows appointed in previous years returned to the institutions from which they had taken leave.

The Training Program

Post-doctoral study continues to be the major training component in the Division's program. During 1970, the laboratory trained 11 Post-doctoral Fellows, from nine countries. Fellowship support was provided by Population Council Fellowships, Ford Foundation Fellowships and the NIH International Fellowship program. We continued our summer-studies student program for the seventh consecutive year, although in 1970 it assumed a somewhat different character. We invited the science department of an inner city high school to recommend students for laboratory work, who might not otherwise have an opportunity to find summer employment. Four young men and women spent the summer with us, and the experience was mutually rewarding.

The Division co-sponsored a symposium on Blastocyst Biology, funded chiefly by the National Institute of Child Health and Human Development, and joined with the American Eugenics Society in sponsoring a symposium on Differential Fertility in Individuals with Mental and Physical Disease. The proceedings of both symposia will be published. Support was also provided for the annual Basel Conference on Sex Chromosomes, the bi-annual meeting of the Latin American Association for Research in Human Reproduction, the Training Course on Reproductive Physiology, Cambridge, England and for travel and study awards for 12 scientists from developing countries to participate in scientific meetings.

Technical Assistance Division

In 1970 both the developed and developing worlds displayed increasing attention to the effects of high population growth rates. Two countries where the Council has been especially active, Thailand and Colombia, announced official population policies; and two others, Iran and Morocco, are giving family planning a new and higher priority in their government development budgets. In another region, Mauritius announced an official policy.

The 1970 censuses showed lower growth rates than had been expected in some of the Latin American countries (2.6 instead of 2.9 per cent), and in India (to 547 million instead of 561 million), although the latter had a higher inter-censal growth rate than was anticipated. The documentation of declines in mortality and increases in growth rates in other areas, however, continued to highlight the problem. Increasing concern has been exhibited—in the United States by the Commission on Population Growth and the American Future, and in the developed world by more vocal expressions on the broad issues of population and environment and increased financial donations to population work.

With Council assistance the training of auxiliary personnel as paraprofessionals, health workers, and family planning visitors received greater emphasis, and this, together with wider approval of mass media use in family planning information and education, produced in some programs marked increases in acceptances. Dominance of contraceptive method as among the pill, the IUD, and traditional methods continued to vary by country; and interest in sterilization through vasectomy and culdoscopy mounted in certain areas. As governmental acceptance continued, interest deepened in the integration of family planning with community health and maternal-child health programs, and the Council is providing assistance to some such programs. Voluntary organizations are still responsible for a great deal of the family planning work being done.

The primary focus of the Technical Assistance grant program remains on family planning programs in developing countries, including the postpartum program. There were eighty-eight grants

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Korean nurse and baby

awarded during the year for work in twenty-two countries. (Details of grant information may be found between page 96 and page 99.) The Far East continued to be the most active technical assistance area, although changing attitudes in Latin America furthered population work considerably in that region.

There was an increased focus upon the accumulation of reliable research data, and grants were made for new studies, experiments, and evaluation work. This emphasis was reflected in the work of the new Research and Evaluation Unit, especially in their organization of past empirical findings, special reviews of selected national programs, and continuing evaluation of the postpartum program.

In New York, the Division experienced important staff changes during the year. Dr. Richmond K. Anderson, Director, resigned on June 8 to take up new responsibilities as Program Director for the Josiah Macy, Jr. Foundation, concentrating on provision of career opportunities in medicine to minority group students. Dr. Anderson had joined the Council in 1964 as the first Director of the Technical Assistance Division.

Dr. Clifford A. Pease, Jr., was appointed Director in June. Dr. Pease joined the Council in 1965, with a background in international public health, and had served as Associate Director of the Division for three and one-half years.

Outreach from the Council continued to be diversified, in addition to the regular programmatic thrusts. Technical Assistance staff this year, as in other years, took an active and significant part in population-oriented conferences all over the world, in teaching, training, planning, and evaluative functions. Several World Bank Missions on family planning and population matters included Council staff members as consultants: Spurgeon M. ("Sam") Keeny of Taiwan and Dr. Allan G. Rosenfield of Thailand worked with the Bank Mission to Indonesia; Dr. Robert Castadot of Morocco visited Tunisia with the Bank to review a five-year integrated maternal-child health/family planning proposal; Dr. N. R. E. Fendall, Regional Director for the Middle East and North Africa, took part in a Bank Mission to explore possibilities for population and health programs in Uganda, Kenya, and Tanzania; Dr. Adaline P. Satterthwaite, of Pakistan, went on a Bank Mission to Mauritius; and Dr. Gerald I. Zatuchni of India worked with the Bank's India Mission.

Fellowships were awarded by the Division to sixteen candidates from eleven developing countries for U. S. study in the field of public

health – with special emphases on population, family planning, communications, administration, and maternal-child health programs. Short-term training awards were made to eight candidates, and travel awards to thirteen, from ten developing countries. Fellowships, tuition assistance, training grants, and travel funds were also awarded to six persons from the U. S., one from Canada, and one from the United Kingdom.

Latin America Moves Toward National Policies

The first official steps in the formation of a national population policy for Colombia were taken following an elective change in government during 1970. Within months after taking office, President Pastrana decreed the formation of a National Population Council, with representation from five Ministries, from the National Department of Planning, from the National Statistics Department, and from three private representatives – the Episcopacy of the Catholic Church, the Colombian Association of Medical Schools (ASCOFAME), and the demographic institutes. This Council was instructed to review all relevant information on population matters, to promote studies or analyses as appropriate, and to advise the government in the formulation of a national population policy. The mandate was carried out expeditiously and a recommendation carrying Presidential approval went to the Congress for consideration.

The Colombian Government, especially through the Ministry of Health and the National Planning Institute, retains primary responsibility for population matters, but ASCOFAME has worked closely and effectively in these areas, often in formal agreement and in joint programs with the Ministry. A vigorous private association, PROFAMILIA, offers family planning services and infertility consultation through private clinics in most large and medium-size cities, and is expanding its public information and education program.

The Ministry of Health absorbed ASCOFAME's regional coordinators for population matters into the supervisory system of its network of service points. These provide family planning consultation as part of MCH services, along with other public health care. ASCOFAME continued its supervision of programs in thirty postpartum hospitals.

The approach to population matters in Colombia reflects a pattern that has evolved in many other Latin American countries.

Priority is given to family and child well-being, to voluntarism in family limitation and child-spacing, and to responsible parenthood in the broadest sense. Family planning services are considered a right to which all classes of society are entitled, along with the usual maternal and child health services. A national demographic change may result, and while many believe this is needed for both national and family well-being, program activities are not motivated or justified on these grounds. The sense of demographic crisis has not yet become primary. For these reasons, educational inputs and broad population research efforts are significant parts of the overall effort; and part of the work is directed toward reducing illegal abortions, which are prevalent in the region and are a serious health menace.

The demand for family planning services is high. In addition to clients attended by private physicians and commercial sales of pills and traditional contraceptives, about 120,000 new clients accepted contraception in 1970, according to statistics compiled by ASCOFAME: 41,780 in Ministry clinics, 28,320 in postpartum hospital programs associated with ASCOFAME, and 49,900 in private association clinics.

New educational efforts center on sex education, family life, and population education, all of which have broad backing despite quite recent starts. These fields are being seriously considered for inclusion in the public school system. Physicians now graduate with training in both the social and health aspects of population matters, and virtually all public health physicians have attended continuing education programs. ASCOFAME also developed plans, with the cooperation of several other Colombian universities, for the analysis of national KAP studies and other recent research.

During 1970 the Population Council was accredited as a Technical Assistance Mission by the Colombian Government, and two resident Council advisors moved to Bogota, to work with ASCOFAME, the School of Public Health of the University of Antioquia, and to a lesser extent with other institutions.

The School of Public Health of the University of Antioquia was granted independent status within the University as it was separated from the Medical School of which it had been a part, and the first year in the five-year plan to establish research and teaching in population was successfully completed as planned.

Elsewhere in the Region, at the School of Public Health in Buenos Aires, Argentina, the first year of a five-year plan for specialized

60

A Tunisian village—the men discuss family planning

work in demography was largely dedicated to the reorganization of the teaching of demographic material to more than 1,500 students of medicine at the University.

In the Dominican Republic, the National Council on Family and Population announced that the network of clinics was expanded to 27 outside of the capital city, in addition to the three clinics in Santo Domingo. 17,200 new family planning patients were registered during 1970, or close to 50 per cent of all those registered since the inception in 1968 of the national program to bring service to women throughout the country.

In 1970 the Council added issue-by-issue translation into Spanish of most of its Information Service publications. These are distributed to a growing list of over 3,500 recipients in Latin America. The initial phase of the Latin American book program was completed in the year—two books in Spanish and two books in Portuguese were published, all by commercial publishers.

Taiwan Increases Its Commitment

The Taiwan program continued its progress in 1970, the score being in all respects higher than 1969. Loop insertions rose 10 per cent to 143,000 and pill acceptors 71 per cent to 55,000. Condoms were added to the program and attracted 49,000 acceptors. The number of couples currently protected by program methods is estimated at 430,000, as compared with 350,000 in 1969 (of 1.8 million eligible). The number of field workers increased from 385 to 442. In addition, the Government took up support of information and education in considerable part, assuming responsibility for activities supported on an experimental basis by the Council.

The population policy committee of the Ministry of the Interior accepted the first half of the draft ten-year plan for family planning, calling for a reduction in the crude birth rate from 27.1 per thousand to 24.4 per thousand by 1976. This goal involves the doubling of the family planning budget, and requires that the fertility of married women under 30 begin to decline. (It rose throughout the 1960's.) The plan awaits clearance by the Cabinet and the Ministry of Finance before it can be used for budget requests.

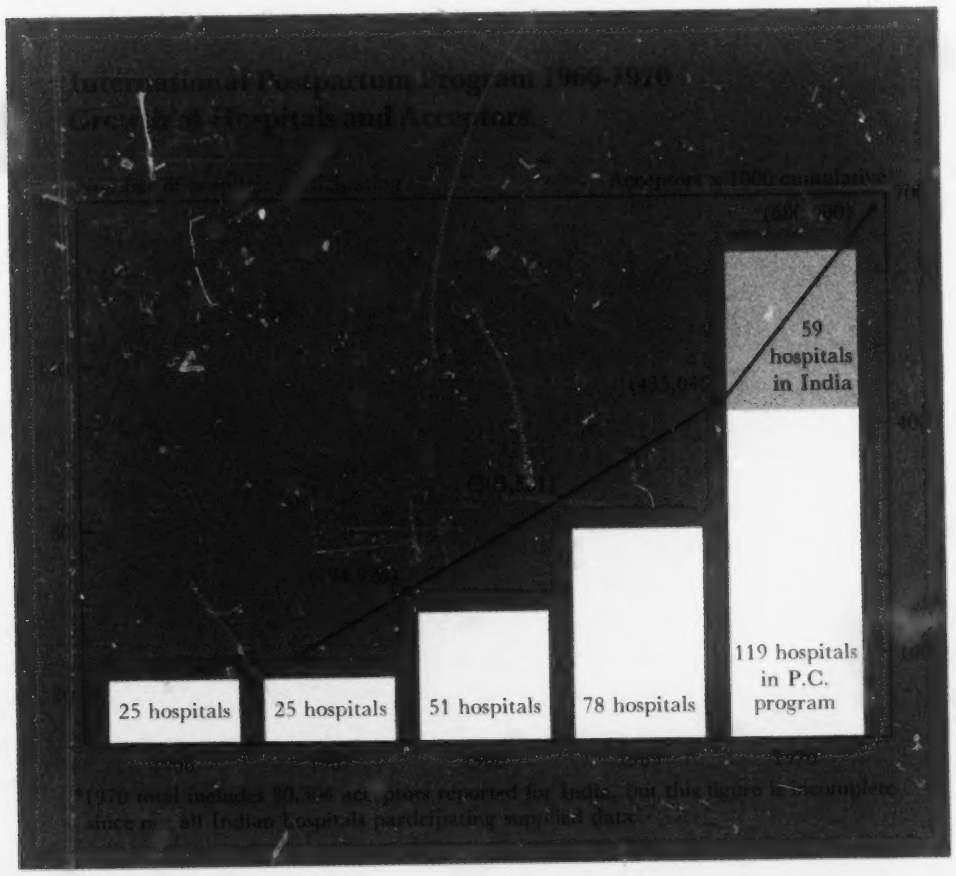
There was considerable interest in the development of female sterilization in Taiwan, leading to demonstrations of the culdoscopic technique by Dr. Alfonso Gutierrez Najar, head of the international culdoscopy course in Mexico City. The government is still consider-

ing a revision in the laws to permit sterilization and abortions in certain circumstances and until this is resolved the government is unwilling to sponsor sterilization officially.

Korea Program Shows a High Increase in New Acceptors

1970 was the best year for family planning in Korea since 1967. A significant factor in the improvement of performance was National Assembly passage of the entire family planning budget for 1970 at the beginning of the year.

The 1970 IUD target would have been achieved except for poor performance in Seoul, where achievement was only 60 percent. Loop insertions rose from 286,000 to 295,100, vasectomy operations from 15,000 to 17,321, and condom users from 146,000 to 163,000. Average pill use was not quite as high as 1969, though there was a strong late-year surge, and monthly pill distribution rose to 276,000 by December, compared to 169,000 in December 1969. Direct costs per acceptor fell during the year to $4.50 from $5.25 in 1969.



The National Family Planning Center was opened in June, as a semi-autonomous arm of the Ministry of Health, under the directorship of Dr. Taek-Il Kim, long associated with Korea's family planning program and the Council efforts in Korea. The Center, which was built with the support of the Swedish International Development Agency, is responsible for research and evaluation, and with the Planned Parenthood Federation of Korea will conduct training and public information activities. The Center is receiving institutional support from SIDA, AID, and the Korean Government.

Korean nurses and nurses' aides are continuing to move overseas, in programs supported by the Government to earn foreign exchange. The consequent reduction of trained health personnel affects family planning services, as well as health service in general. There seems to be no prospect of a change in government policy in this area.

The third five-year economic development plan (1972–1976) neared its final form. It has previously been announced that the target for the population increase rate in 1976 would be 1.5 per cent, down from the present approximate 2.0 per cent. However, the target may be changed to a 1.5 per cent *average* increase for the five-year period, implying an actual growth rate at the end of 1976 of 1.3 per cent, and a 60 per cent increase in effort and contraceptive targets.

National Policy for Thailand

Thailand made notable progress in 1970, in both policy and program. In March, the Cabinet approved a national population policy: "*. . . supporting family planning through a voluntary system, in order to resolve various problems concerned with the very high rate of population increase, which will constitute an important obstacle to economic and social development of the nation.*" The Cabinet also approved the appointment of a committee to study and coordinate the implementation of the policy.

In performance, the 1970 program recorded substantial gains over 1969. Acceptance of loops, pills, and sterilization rose 83 per cent to 225,000, or about 40 acceptors per 1,000 women of childbearing age. This brought Thailand into the small group of vigorous national programs. A substantial increase in pill acceptors resulted from a change in policy permitting auxiliary nurse-midwives to prescribe pills after a simple check test.

64 The official population policy is expected to result in a number of

important innovations: inclusion of growth and acceptor targets in the five-year plan covering the years 1972–1976; direct government budgetary support for family planning activities (which has heretofore been indirect through the health network); an information and education program including mass communications; and experiments in various methods for delivery information and services to potential clients.

The impressive yearly increases in acceptors have been the result mainly of extension of contraceptive services into new areas. The crucial question for 1971 will be whether the program intensification made possible by the new policy will increase the number of acceptors per service point.

Ceylon–Support Shifts to Other Agencies

The Council advisor to the Ceylonese family planning program returned to the United States in January 1970, and the Council decided at the end of the year to close its office in Ceylon. Major support is now expected to come from the Swedish Government and the international agencies, and further Council activities in Ceylon will be on an ad hoc basis.

Prior to the elections of May 1970 the Government adopted a cautious approach to family planning, and following the elections the new government spent considerable time formulating its policy. It now appears that family planning will continue to be supported as a maternal and child health, but not as a demographic, measure; incentives and acceptor targets will not be used. The Swedish agreement was renewed in October 1970 for three years, and a SIDA advisor has returned to Ceylon, indicating continuing government interest in family planning.

The political situation in the first half of the year does not appear to have set family planning back. There were 28,153 acceptors in the first half of 1970 (the most recent period for which figures are available) as compared to 25,661 in the same period in 1969. Contraceptive acceptance appears to be shifting from the loop to the pill and sterilization.

Turkey–a Plateau Is Reached

Despite the evidence of a strong desire among the population for contraception, as shown by the 1963 and 1968 KAP surveys, by response to mobile teams, and by other indicators, the national program has for some years moved quite cautiously. Some 500 pre-

existing health facilities offer family planning along with their other services, but these facilities are not well dispersed outside urban areas. One very active postpartum clinic has in fact accounted for about a seventh of national performance, and a central determination to implement a strong program has not emerged.

Simultaneously, Turkey has been beset by socio-economic troubles, political dissent, foreign exchange difficulties, and student unrest, which have reduced family planning to a low-priority activity. The cumulative number of IUD acceptors is still short of 250,000; service statistics have consistently shown slow progress; and the overall cost per acceptor exceeds $40 per person.

Two encouraging signs during the year were that the Family Planning Association of Turkey was reinvigorated and initiated a country-wide public information and education program. This reached nearly 150,000 persons and resulted in some 10,000 acceptances. Secondly, the Development Foundation of Turkey began exploring the possibilities of conventional contraception. It also drew up plans for a comparative field trial of health-integrated vs. non-health-integrated family planning activities.

The Population Council is pleased to have been associated with Turkey's family planning program since its inception in 1963. During the course of this year, it was decided to reassign our resident representative, given the pressure on the Council's resources, and to maintain an interest in Turkey's program through periodic visits by the New York staff.

Strong Governmental Support for the Iran Program

The program continues to benefit from a favorable political climate and strong leadership from His Imperial Highness the Shahanshah. The original budget provided in the Fourth Development Plan (1967–1972) was expended in three years, and was increased by 70 per cent. A fourfold increase in expenditure is being projected for the next development plan.

Isfahan Province is now being developed as a prototype province, with coordination of effort between the Ministry of Health, the Provincial Health Office, and the University. A major communications experiment was initiated there with Council financing and resident advisory assistance in the person of Mr. Robert Gillespie. The purpose of the experiment is to test the effect of varying kinds of public information and service approaches. It was expected to give

important guidance to expansion of the Iran program and to communications activities elsewhere in the world.

Two regional meetings were held in Iran: a communications workshop and a WHO-sponsored teaching seminar on the health aspects of reproduction, family planning, and population dynamics. The nineteenth Iranian Medical Congress devoted a session to Family Planning. Staff members of the Ministry produced books on population in Iran, family planning in Iran, sex education, and abortion.

Recent monthly statistics show active pill acceptors at over 150,000, and cumulative IUD acceptors at just under 50,000. Commercial sales of oral contraceptives are in the region of 100,000 cycles per month. A major problem is the unusually low continuation rate on oral contraception, particularly in light of Iran's heavy dependence on the oral method.

Reorientation of the Pakistan Program

Political and administrative changes, social unrest, and natural catastrophe have contributed to impede the progress of the family planning program in Pakistan. The accomplishments of the Third Development Plan (1965–1970) reflected the establishment of an effective family planning infrastructure, the spread of knowledge of family planning throughout the country, and effective service networks for clinical and conventional contraception. The Fourth Plan (1970–1975) revised the targets to 9.6 million births prevented and doubled the expenditure. Plans call for the replacement of *dais* by trained auxiliary family planning village education workers, focusing of targets on prevention of births instead of first acceptances, an increase in Lady Family Planning Visitors, and a general trend from temporary staff to permanent personnel. The cumulative total of IUDs inserted now exceeds 3 million, conventional contraceptive sales approach 700 million units, and sterilizations approximate 1.2 million.

The United Nations and the Government of Pakistan concluded an agreement by which the UN Development Fund will provide 1.7 million dollars for logistic support, MCH/family planning, postpartum activities, research, evaluation, and training activities, with provision for fellowships and consultants. The International Bank for Reconstruction and Development reviewed the demographic situation and family planning program during the year and recom-

mended an improved system of vital registration and a re-examination of the relationship between health and family planning. It also concluded that a realistic target would be to reduce the birth rate to 40 per 1,000 during the Fourth Five-Year Plan. The Ford Foundation Grant to the Council in support of its activities in Pakistan was extended from September to the end of the year. The original project of fostering research and training through the National Research Institute of Family Planning will change, under a decision to absorb the Institute's activities into other institutions in order to avoid duplication of effort and to conserve scarce resources. Over the years the Institute was remarkably successful in promoting training, research, and evaluation, and in developing local Pakistani talent.

Morocco Creates a Family Planning Commission

The Superior Council of the Plan reviewed Morocco's Five-Year Plan, and reiterated the high priority of family planning. A Family Planning Commission was created within the Ministry of Health to integrate, coordinate, and expand family planning activities. The national program was not yet a large endeavor, however, falling very seriously behind its last three annual goals. Provincial targets were revised, and audio-visual materials and training manuals produced. A voluntary Family Planning Association was initiated, and public meetings and professional seminars were held.

The Council's enabling Ford Foundation Grant of $322,000 which was made in 1966, was fully expended, and was replaced by a North African Regional Grant through the Council, which will support resident advisors, consultants, fellowships, and research and evaluation activities. The Council continued to maintain a resident medical advisor in Rabat.

The attempt to popularize condoms through sales in tobacco retail stores was not a success and has been withdrawn. National performance, however, showed signs of improvement. First visits to family planning clinics increased, and the number of persons accepting oral contraception rose by 40 per cent. The provisional cumulative total of contraceptive acceptors in the official program is about 63,000, of which 38,600 chose the IUD and 22,600 oral contraception. (1970 provisional figures were about 8,700 and 11,600 respectively.) Monthly sales of orals through the private sector have risen from 12,000 in 1967 to 53,000 during 1970.

Tunisia Program Is Being Strengthened

The National Family Planning Administration was reorganized, and a prominent lady obstetrician/gynecologist appointed to head the program. The outstanding need is to strengthen clinical and educational aspects of the program.

President Bourguiba once again spoke publicly in favor of family planning, as did the Prime Minister and the Minister of Public Health. Subsequently much favorable publicity and discussion appeared in the national newspapers.

The Council has continued to support three resident advisors in general advisory, research and evaluation, and educational roles. The results have been a strengthening of service statistics as a first step towards quality evaluation; the development of school education prototype film and audio-visual teaching materials; and a consistency in program development. Training is probably the greatest need of the program, and a lack of trained manpower for both educational and clinical services is particularly apparent at the village level.

The Council continued its financial assistance; and, as in Morocco, the enabling Ford Foundation Grant of $324,000 of 1966 to the Government of Tunisia to help initiate the program is being closed out and replaced by the North Africa Regional Grant. USAID continued to assist on a substantial scale, and negotiations were conducted with the International Bank for Reconstruction and Development for assistance.

Acceptances are up slightly over 1969, with approximately 9,600 first acceptors of IUDs and 9,900 first-time pill acceptors, although pill continuation appears to be a problem. The levels of tubal ligations and social abortions, 2,526 and 2,688 respectively in 1970, are about the same as during 1969.

Sub-Saharan Africa Has a New Council Regional Advisor

A third country in Sub-Saharan Africa, Mauritius, announced a national family planning program during 1970. It thus joined Kenya and Ghana, which had previously instituted such programs. These three countries have a combined population of about 21 million, and thus comprise some 10 per cent of the total population of the independent countries of Sub-Saharan Africa.

At the same time, public concern for population matters grew
69 elsewhere in Sub-Saharan Africa. An important stimulus to such

concern was the publication in several countries of results of censuses taken during 1970. In most instances, population growth was shown to be more rapid than anticipated, with evidence of continuing declines in mortality. Simultaneously there were increasingly strong indications that in some areas of Sub-Saharan Africa fertility was rising. With the exception of the three countries mentioned, however, extreme caution in the area of population policy continued to be evident.

Voluntary associations continued their active role in the Anglophone countries, and began to function more vigorously in some of the Francophone countries. A substantial number of other outside agencies—national and international, private and governmental—continued their various programs in Sub-Saharan Africa.

An important new step in the Council's work was taken with the appointment of a regional advisor for technical assistance activities. Dr. Benjamin Major, an obstetrician and gynecologist, who recently completed a Ford Foundation mid-career fellowship in Maternal-Child Health Care and Family Planning, took up the position, with Accra, Ghana, as his base. His work will fall into three main areas: to advise on technical assistance programs in which the Council has an interest (with the exception of Kenya, where the Council continues to provide a full-time resident advisor); to carry out an extended survey of the capabilities and interests of the various medical institutions for family planning and related medical education; and to provide in Ghana such useful and appropriate technical services as are agreed with the Director of the Ghana National Family Planning Program. It is anticipated that the three areas will receive roughly equal emphasis.

In Kenya, which was the first country in Sub-Saharan Africa to announce a national family planning program, the Council continues to assist through the provision of the Chief Medical Advisor on Family Planning in the Ministry of Health. During 1970 in Kenya, the average number of new acceptors per month rose to above 3,000, services being provided through some 250 clinics throughout the country. The program continued to depend essentially on pills and IUDs in roughly equal proportions, with a slight trend in favor of pills noted in the most recent months.

A program for training in the teaching and techniques of family planning was developed, to be given to all personnel of the Kenya Ministry of Health, and training for senior medical personnel pro-

The All-India Institute of Medical Sciences—New Delhi

ceeded satisfactorily. Plans were made to begin offering training to all nurses, midwives, and other supporting staff.

The Council supported four postpartum programs in the Region – two in Nigeria and two in Ghana.

The International Postpartum Program – Still Expanding

The International Postpartum Program began its fifth year of operation in April 1970. The cumulative number of acceptors since the beginning of the program reached 599,213 with the addition of 164,266 new acceptors during 1970 at 116 hospitals in 13 countries. Of the slightly more than 600,000 women who delivered or aborted at program hospitals during 1970, 16 per cent accepted a family planning method within three months of leaving the hospital.

The most frequently chosen contraceptive method in the program continued to be the intrauterine device (53.65 per cent), a third of these being inserted prior to discharge from the hospital. One third of the acceptors began taking oral contraceptives and one in twelve was sterilized.

Although expansion of participating hospitals took place during 1970 in Colombia, Venezuela, Ghana, Mexico, the Philippines, Thailand, and Indonesia, a policy decision was made to limit expansion of council-supported programs and to begin the process of helping older hospitals find other sources of support. To this end, discussions were held with WHO, IPPF, and other organizations, to interest them in supporting these activities.

Technical assistance activities were intensified in 1970, particularly with programs whose performance levels had plateaued. Because of budgetary and other changes, several programs began showing improved performance levels by the end of the year. Evaluation of the program was strengthened by the implementation of an extensive acceptor follow-up survey and several smaller studies.

The Postpartum Program in India

By the end of 1970 the All India Hospital Postpartum Program was operational in the 59 hospitals approved by the Government of India. Preliminary reporting indicated a total of 80,314 acceptors, 40 per cent of whom accepted sterilization. If the 62 additional hospitals already approved by the Government are operational before the end of 1971, 91 of the 95 medical colleges will be included in the program.

Family Planning in Medical Schools

In May 1969, the Office of Economic Opportunity approved a grant of $1,917,000 to the Population Council as prime grantee for a program to enable fourteen American medical schools to extend family planning and MCH care to the underprivileged in areas served by the universities. Procedural and staffing problems delayed program implementation at many universities, but by March, considerable progress had been made in extending services and training programs for the poor. Problems of a policy and administrative nature complicated the Council's relations with OEO during the first year; nonetheless, proposals for program re-funding and expansion were requested by OEO and submitted to Washington for another year, with the understanding that the Council, having brought the program into being, would continue its stewardship of the program for this one additional year. However, a satisfactory arrangement could not be reached and the Council informed OEO that it would withdraw after March 31, 1971. It was expected that an alternative prime grantee would continue the program so that the work at the universities could continue without interruption.

Better Family Planning, Inc., Philadelphia

Better Family Planning continued to offer family planning as an integral part of clinics with a wider range of health services. It strengthened its activities during the year, with funding from both the Council and the Department of Health, Education & Welfare. By the end of the year cumulative acceptors stood at about 10,000, of whom about 80 per cent had chosen the pill, and about 10 per cent the IUD. Although operations went forward, analysis and evaluation activities remained quite limited. Prospects are favorable under pending legislation for a shift to 90 per cent Federal funding.

Research & Evaluation Unit

As we reported last year, in mid-1969 the Council created a new research and evaluation unit within the Technical Assistance Division. The purpose behind this move was to strengthen the commitment of the division, as well as that of the Council, to family planning research and evaluation, and to facilitate cooperation between staff members chiefly concerned with these areas and those primarily involved in program development. During 1970 this unit

became fully operational.

Staffing of the new unit was completed with the appointment of John A. Ross, Associate Director of the Division, as Head, and Robert J. Lapham, formerly of the Demographic Division, as Deputy Head. Four staff associates, a research associate and three research assistants complete the unit, with the collaboration in the field of evaluation specialists in Korea and Tunisia.

The Unit's work included a heavy emphasis on the continuing assessment of the International Postpartum Program. Besides processing of the regular service statistics from the individual hospitals, an ambitious follow-up survey was undertaken and data collection completed. It covered clients in a sample of 31 hospitals in 11 countries. Its objective was to determine continuation rates, to learn demographic characteristics of acceptors, and to permit statistically reliable comparisons between different contraceptive methods and post-acceptance experience in the various regions and countries, by age and parity groups. Further, a major review of findings of postpartum programs was begun, to be published in mid-1971.

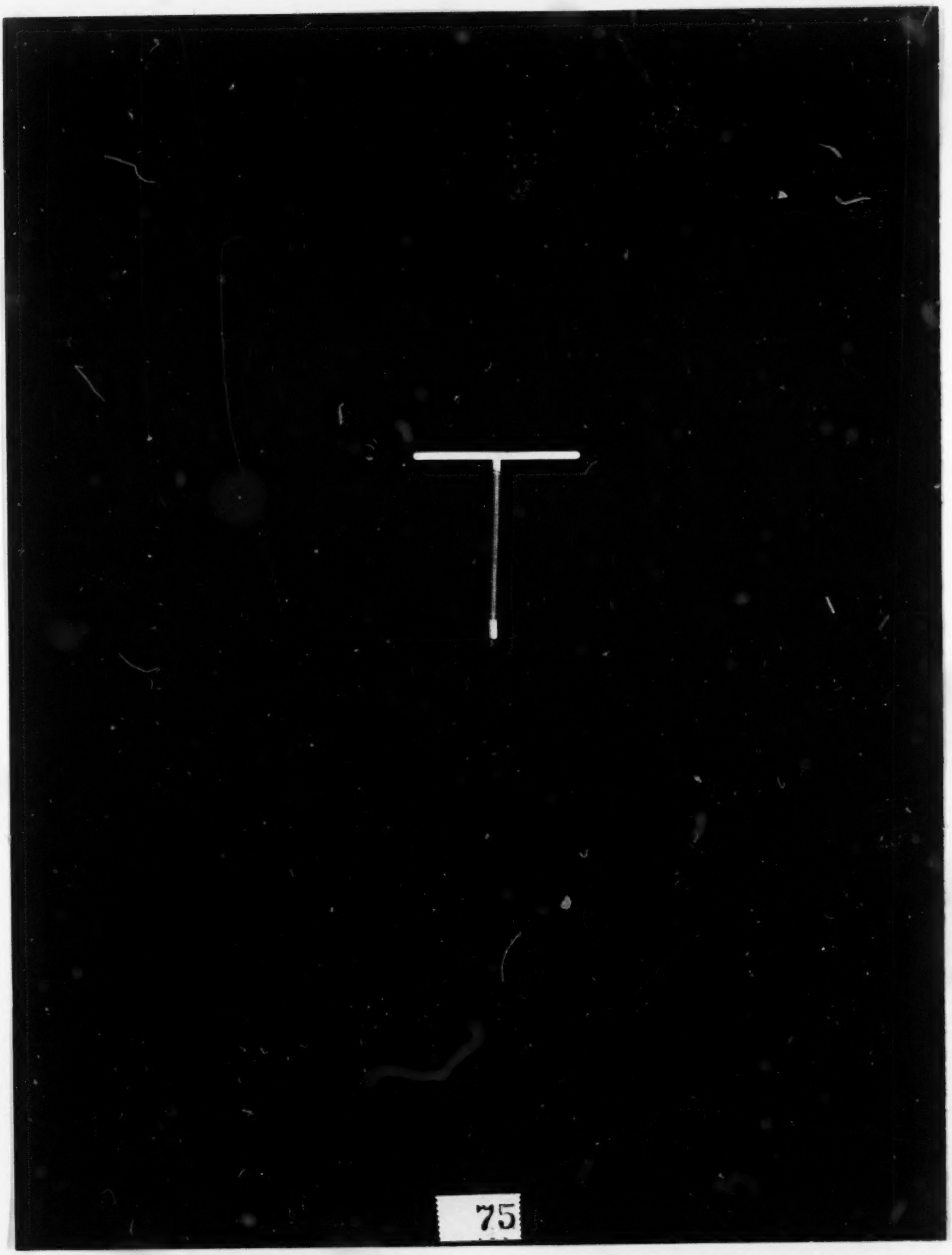
In the larger field of evaluation the unit undertook a project to digest and publish the chief empirical findings on fertility control. These findings, together with a brief presentation of evidence supporting each, are also planned for publication in mid-1971. Supporting this effort was the creation of a new small library of evaluation literature.

The unit also began reviews of the major country programs with which the Council is involved. Two such programs, those of Thailand and Taiwan, were examined to assess each country's demographic situation and prospects, the progress of the action program, the role of other assisting organizations and the proper next steps of the Population Council.

Field trials of an important new intrauterine device, the "Copper-T," were instituted in collaboration with Dr. Howard Tatum's work in the Bio-Medical Division. This promising method may prove highly superior to the current loop in overall continuation and in diminution of side effects.

Unit members engaged in a variety of internal research projects, outside instruction, speaking engagements, and overseas consultation. The general effort was to shape the new research and evaluation activity wisely and to aid ongoing action programs through improved analysis and technical knowledge.

BABIES
SHOULD BE
PLANNED



Publications Program

The Population Council seeks to advance and apply knowledge in the field of population. In part this is done by sharing with some 8,000 people, half of whom are overseas, the results of work in the population field. Council publications go to headquarters of national family planning programs, university departments, libraries, census bureaus, planning ministries, and editorial offices of newspapers, indexes, and other publications. The point of the program is to bring the highlights of new information quickly to those who most need it.

Four of the Council's publications appear regularly. *Studies in Family Planning*, a monthly bulletin first issued in 1963, reports major new developments in ongoing programs, early results of field experiments and surveys, and new ideas about improving programs. Two-thirds of the articles that are specific to a geographic area deal with the developing world. The contributors are Council staff members in New York and the field, program administrators, and scholars. *Studies*, ranging from eight to forty pages and containing from one to six separate articles per issue, is translated into French and Spanish.

The second periodical, *Current Publications in Population/Family Planning*, is a four-page abstract/bibliography issued every other month and consisting of about thirty titles—books, published articles, and unpublished manuscripts—deemed by Council staff members to be of particular interest to administrators and scholars in the field. Its purpose is to alert people to important new information in the literature in four areas: demography and social science, human reproduction and fertility control, family planning programs, and population policy.

The third series is *Country Profiles*, written to a standard outline by demographers or program administrators, setting forth the nature, scope, and accomplishments of population activities in a specified country. In 1970, *Profiles* were published on Chile, Ghana, Korea, Malaysia, Mauritius, Pakistan, the Philippines, Taiwan, and Turkey. Selected issues are translated into French and Spanish. The aim is to encourage cross-country comparison of solutions to various problems, with an eye to their wider applicability.

The Copper T—promising step in contraceptive research

Reports on Population/Family Planning, the fourth publication, presents in depth the state of the art—everything we know and everything we wish we knew—of a central topic in population/family planning. In 1970 the Council published four *Reports:* "Governmental Policy Statements on Population: An Inventory," prepared in the Population Division of the United Nations; "Population and Family Planning Programs: A Factbook," by Dorothy Nortman, Staff Associate in the Demographic Division; "Commercial Production and Distribution of Contraceptives," by Alfred D. Sollins, Consultant to the Bio-Medical Division, and Raymond L. Belsky, Staff Associate in the Bio-Medical Division; and "Voluntary Sterilization: A World View," by Harriet B. Presser, Assistant Professor of Socio-Medical Sciences, International Institute for the Study of Human Reproduction, Columbia University, formerly a Staff Associate in the Council's Demographic Division. Selected *Reports* are available in French and Spanish. The goal of this series is to round out our picture of the field so that we know where we are less informed and where we are reasonably knowledgeable.

These four publications, edited and produced by the Council's Information Service, are issued without charge, and bulk orders are filled for educational purposes. The Information Service, which began operation in January 1969, receives funds from the Ford Foundation, the International Bank for Reconstruction and Development, and the Fund for Population Activities of the United Nations Development Program.

A fifth Council periodical, the *Population Chronicle*, provides an up-to-date account of population matters for the interested non-specialist. It is directed particularly at policy-makers, businessmen, politicians, and other "men of affairs." At the end of the year a total of 7,758 recipients in 97 countries were on the mailing list.

In addition to the periodical publications of the Council, advances have been made in the development of a scholarly book program. Among the hard-cover books scheduled for publication by McGraw-Hill Book Company during the course of 1971 are Gerald I. Zatuchni's *Post-Partum Family Planning; Ideology, Faith and Family Planning in Latin America* edited by J. Mayone Stycos; *Family Planning and Fertility Control: A Reader* by John Ross and John Friesen; and *Is There an Optimum Level of Population?* edited by S. Fred Singer.

78 Two volumes in the new Occasional Papers series came out in

1970: Henry P. David's *Family Planning and Abortion in the Socialist Countries of Central and Eastern Europe: A Compendium of Observations and Readings* appeared in the spring; and *Psychology and Population: Behavioral Research Issues in Fertility and Family Planning* by staff psychologist James T. Fawcett was published in time for the American Psychological Association's annual meeting in September 1970.

After several years of collaboration with experts in India, George B. Simmons of the Center for Population Planning, University of Michigan, has prepared a detailed account of the Indian family planning program for the Occasional Papers series entitled *The Indian Investment in Family Planning*. It is scheduled to appear in the summer of 1971.

President Johnson's Committee on Population and Family Planning recommended that a survey be undertaken to assess the availability of professional staff to work in the population areas, with particular reference to demography and family planning. The Population Council agreed to undertake the study and in November a report by Lee L. Bean, Richmond K. Anderson, and Howard J. Tatum entitled *Population and Family Planning: Manpower and Training* was received for Summer 1971 publication in the Occasional Papers series.

A full length account of the Second Workshop on Abortion held under the auspices of the National Institute of Mental Health will be published as an Occasional Paper in the fall of 1971 under the title *Abortion, Obtained and Denied: Research Approaches.*

The main purpose of the Occasional Papers series is to provide a means for the publication and distribution of scholarly materials in the field of population which might not enjoy success as commercial publishing ventures, but which, nevertheless, deserve distribution by virtue of their intrinsic merit.

Another volume published by the Council in March 1970, *A Manual for Surveys of Fertility and Family Planning: Knowledge, Attitudes, and Practice*, is described in the report of the Demographic Division. This volume, too, was well received and it is anticipated that a reprint will be necessary in 1971.

While excellent French language materials on demography have been available from metropolitan France and other francophone countries, the same could not be said of other subject areas such as family planning. In January 1970 the Council appointed Gustave Harcourt, formerly with the Regional Technical Aids Center of the

United States Agency for International Development in Paris, to manage a French language translation and publishing program in that city. During the course of the year, twenty projects were completed and widely distributed. For the most part, selection of materials for translation was restricted to the Information Service publications. In addition, the following books were included in the program: *Population: Challenging World Crisis*, edited by Bernard Berelson and published by the Voice of America in its Forum Lecture Series; *The Population of Tropical Africa*, edited by J. C. Caldwell and C. Okonjo and published by Longmans in London in 1968; *A Manual for Surveys in Family Planning: Knowledge, Attitudes and Practice*, published by the Population Council in 1970; *Recommendations for Teaching Family Planning in Medicine*, published by the Josiah Macy Jr. Foundation in 1967; and *Family Planning: A Teaching Guide for Nurses*, by Miriam Manisoff, published by the International Planned Parenthood Foundation. Distribution of the French language material was facilitated by a special mailing list which currently totals approximately 2,000 names. The publications are sent to many French speaking countries.

The Spanish translation/publishing program operated by the Colombian Association of Medical Schools (ASCOFAME), Bogota, and supported by a Council grant, was continued throughout the year and here, too, a system was established to translate Information Service publications on a regular basis. The Council's *KAP Manual* which appeared in English in March 1970, was sent to Bogota for publication in Spanish. Spanish language materials are distributed through a center operated jointly by ASCOFAME and the Population Reference Bureau in Bogota.

The Council also supports publication, through Latin American commercial publishers, of books on population originally published in English. For the most part, such arrangements have been made through Franklin Book Programs, Inc., a nonprofit organization for international book publishing development. Out of ten books and bibliographies sponsored under this scheme since 1965, eight had been published and distributed by the end of the year and two were in the process of being completed. One title was a Spanish language original, one was a bibliography and the others were translations. In most cases the Population Council supported all of the prepublication costs. Of the eight books completed, three were in Portuguese and five in Spanish.

Lewis Sutherland Anderson 1910-1971

Dr. Lewis S. Anderson, former Council staff member in Ankara, Turkey, died in his sleep on February 17, 1971. Dr. Anderson was a lively, energetic man; clear-eyed, with a straightforward but sensitive manner and a quiet sense of confidence that readily communicated itself to others.

He was born in the United Kingdom in 1910 and was educated at Edinburgh University, Scotland, where he earned his Bachelor's degree in Science (Agriculture). He graduated in medicine from Manchester University in England and later returned to Edinburgh where he received his Diploma in Public Health.

After six years in medical service in the Royal Navy, he began a career in international public health that was to last twenty-five years. He served as Deputy Medical Officer of Health in Nairobi, Kenya, for three years, and then became Health Unit Director for the Provincial Health Department in Victoria, British Columbia. In 1960 he joined the World Health Organization, first as Advisor in Public Health to the Government of Kerala, India, and later as Assistant to the Director of Health Services for the WHO African Region. He then returned to British Columbia as Medical Health Officer in North Vancouver, just prior to joining the Council.

From 1965 to 1970 he served the Council as resident medical advisor in Turkey. Upon the closing of that office, his services were loaned to the International Development Research Centre, in Ottawa, Canada, to assist them in the development of their population activities. His death occurred only a few weeks after he assumed this new responsibility. Surviving Dr. Anderson are his wife, Mary, two daughters, Caroline and Frances, and two sons, Robert and Eric.

A cable from Dr. Vedat Ali Ozkan, Turkish Minister of Health, expressing condolences on behalf of his country, referred to Dr. Anderson as ". . . this esteemed personality, whose services to Turkey will always count." The certain legacy of the dedication and competence he brought to half a lifetime of effort in international public health is that it *does* count—and that it goes on counting.

Fellowships

Demographic Fellowships

Africa

Algeria

MOHAMED MEHANI, Chef de la Section de Demographie, Faculté des Lettres, Algiers; fellowship for study in demography at l'Institut National d'Etudes Démographique, Paris; twelve months beginning October 1970.

DJAMAL-EDDINE BENZINE, Chief System Analyst/Programmer, Sous-Direction des Statistiques, Algiers; fellowship for training in computer programming at the Bureau of Applied Social Research, Columbia University, and the Population Council; twelve months beginning September 1970.

Cameroon

EMMANUEL ACHU GWAN, student, Fourah Bay College, Freetown, Sierra Leone; fellowship for study in demography at the University of California, Berkeley; twelve months beginning September 1970.

Nigeria

JOHN ADEPOJU, Assistant Lecturer, University of Ife, Ile-Ife; renewal of fellowship for study in demography at the London School of Economics; twelve months beginning October 1970.

OLADELE O. AROWOLO, Junior Research Fellow, University of Ife, Ile-Ife; fellowship for study in demography at the University of Pennsylvania; twelve months beginning September 1970.

THEOPHILUS O. FADAYOMI, Junior Research Fellow, University of Ife, Ile-Ife; fellowship for study in demography at the London School of Economics; twelve months beginning October 1970.

Somalia

MOHAMUD A. JAMA, graduate student; renewal of fellowship for study in demography in the Department of Sociology at the University of Wisconsin; twelve months beginning September 1970.

Economists confer at the Council

Tunisia

YOUNES ZOUGHLAMI, graduate student; fellowship for study in demography at Institut de Démographie, Université de Paris; twelve months beginning October 1970.

MOHAMED LAKHOUA, staff Centre d'Etudes et de Recherches Economiques et Sociales, Université de Tunis; fellowship for study in demography at the United States Bureau of the Census; twelve months beginning September 1970.

BADREDDINE MELLITI, Chargé de la Section des Statistiques a la Direction du Planning Familial, Tunis; fellowship for study in demography at l'Institut de Statistique, Université de Paris; twelve months beginning October 1970.

Uganda

JOHN CHRYSOSTOM K. KABAGAMBE, student; fellowship for study in demography at the London School of Economics; twelve months beginning October 1970.

ERIC KASHAMBUZI, Special Assistant Lecturer, University of Nairobi; renewal of fellowship for study in demography in the Department of Demography at the University of California, Berkeley; ten months beginning November 1970.

RABINDER KUMAR SHARMA, graduate student; renewal of fellowship for study in demography in the Graduate Group in Demography at the University of Pennsylvania; twelve months beginning September 1970.

United Arab Republic

MOHAMED NABIL EL-KHORAZATY, Research Associate, Institute of National Planning, Cairo; renewal of fellowship for study in biostatistics and demography in the Department of Biostatistics at the University of North Carolina; eleven months beginning October 1970.

DR. SAAD GADALLA, Assistant Director, Social Science Research Center, The American University in Cairo; second fellowship, postdoctoral, for study in demography at the Center for Population Planning, University of Michigan; nine months beginning October 15, 1970.

EL-SAYED EL-SAYED NOUR, Demonstrator, Department of Statistics, Faculty of Economics, Cairo University; renewal of fellowship for

study in biostatistics and demography in the Department of Biostatistics at the University of North Carolina; twelve months beginning September 1970.

Upper Volta

SIDIKI PHILIPPE COULIBALY, Teacher, Technical High School, Ouagadougou; fellowship for study in demography in the Department of Sociology, Cornell University, preceded by an English language course at Bucknell University; twelve months beginning September 1970.

The Americas

Argentina

MARIA CRISTINA CACOPARDO DE MORENO, Researcher, Centro de Bioestadistica y Demografia, Buenos Aires; fellowship for study in demography at the University of Rome; twelve months beginning November 1970.

JOSE LUIS MORENO, Research Assistant, Torcuato Di Tella, Buenos Aires; fellowship for study in demography at the University of Rome; twelve months beginning November 1970.

Bolivia

BENJAMIN FRANCO-SUAREZ, Ph.D. Candidate, Cornell University; fellowship for data collecting and writing of dissertation in sociology with emphasis on demography in the Department of Sociology, Cornell University; twelve months beginning September 1970.

Brazil

LUCIA M. B. FEITOSA, Technical Assistant, Central Bank of Brazil, Rio de Janeiro; fellowship for study in demography in the Department of Sociology at Brown University; twelve months beginning September 1970.

Canada

JUDITH A. HARRINGTON, graduate student, University of Western Ontario; renewal of fellowship for study in demography in the Department of Sociology at Cornell University; twelve months beginning September 1970.

DONALD R. LAVIS, graduate student, Ontario; fellowship for study in demography in the Department of Demography at the Australian National University; twelve months beginning September 1970.

NORBERT YVES ROBITAILLE, student, University of Montreal; fellowship for study in demography at Institut National d'Etudes Démographique, Paris; twelve months beginning September 1970.

Chile

GERMAN RODRIGUEZ, graduate student; fellowship for study in demography in the Department of Biostatistics at the University of North Carolina; twelve months beginning September 1970.

Colombia

FERNANDO GOMEZ, Research Associate, Colombian Association of Medical Faculties, Bogotá; fellowship for study in demography in the Department of Sociology at Cornell University, preceded by an English language course at Bucknell University; twelve months beginning September 1970.

Mexico

MERCEDES PEDRERO, Researcher, El Colegio de Mexico; second renewal of fellowship for study in demography in the Graduate Group in Demography at the University of Pennsylvania; twelve months beginning September 1970.

United States of America

JUDITH P. GAFFIN, Ph.D. Candidate, University of California, Berkeley; fellowship for study in demography in the Department of Sociology at the University of California, Berkeley; twelve months beginning September 1970.

ROBERT W. GARDNER, graduate student; renewal of fellowship for study in demography in the Department of Demography at the University of California, Berkeley; twelve months beginning September 1970.

EDWARD C. HARRIMAN, Associate Professor, Faculté des Lettres, University of Montepellier, France; fellowship for study in demography at the London School of Economics and dissertation research in India; twelve months beginning September 1970.

KAREN C. HOLDEN, Ph.D. Candidate, University of Pennsylvania; fellowship for study in economics/demography in the Department of Economics at the University of Pennsylvania; twelve months beginning June 1970.

EDWARD M. HUMBERGER, Training Associate in Family Planning, Ford Foundation, India; fellowship for study in demography in the

Department of Political Science at the University of North Carolina; twelve months beginning February 1971.

Douglas G. Madigan, Teaching Fellow, University of Pittsburgh; fellowship for dissertation research in demography in the Department of History at the University of Pittsburgh; twelve months beginning September 1970.

Norfleet W. Rives, Jr., Ph.D. Candidate; fellowship for study in demography at the Office of Population Research at Princeton University; ten months beginning September 1970.

Lois M. Verbrugge, Ph.D. Candidate; renewal of fellowship for study in demography in the Department of Sociology at the University of Michigan; twelve months beginning September 1970.

Asia

Korea

Dr. Jong Kun Kim, Assistant Professor, Department of Statistics, School of Public Health, Seoul National University; fellowship for study in demography at the University of Tokyo; twelve months beginning September 1970.

Hyun Sang Moon, staff, Family Planning Evaluation Team, Seoul; fellowship for study in demography in the Department of Social Sciences at the University of Chicago; four months beginning September 1970.

Eui Hang Shin, Ph.D. Candidate; renewal of fellowship for study in demography in the Graduate Group in Demography at the University of Pennsylvania; six months beginning June 1970.

Pakistan

Iqbal Alam, Staff Demographer, The Pakistan Institute of Development Economics, Dacca; renewal of fellowship for study in demography in the Department of Population and Family Health at The Johns Hopkins University; twelve months beginning September 1970.

K. Rashid Javaid, Ph.D. Candidate, Duke University; fourth renewal of fellowship for study in demography in the Department of Economics at Duke University; eight months beginning September 1970.

Mohammad Ashraf K. Kayani, graduate student; fellowship for study in demography in the Department of Sociology at the University of Alberta; twelve months beginning September 1970.

MASIHUR R. KHAN, Staff Demographer, The Pakistan Institute of Development Economics, Dacca; second renewal of fellowship for study in demography in the Department of Demography at the Australian National University; sixteen months beginning March 1970.

MUHAMMAD RAFIQ, Research Supervisor, Social Sciences Research Centre, University of the Panjab, Lahore; third renewal of fellowship for study in demography in the Department of Sociology at the University of Chicago; nine months beginning October 1970.

ABUL K. M. A. ROB, Lecturer, University of Dacca; fellowship for study in demography in the Department of Economics at Duke University; twelve months beginning September 1970.

Philippines

VIRGILIO C. AGANON, Statistician, Comprehensive Community Health Program, University of the Philippines, Bay Laguna; renewal of fellowship for study in demography in the Department of Geography at the University of Chicago; twelve months beginning September 1970.

ALFONSO C. DELFIERRO, JR., Part-time Research Assistant, Research Institute for Mindanao Culture, Xavier University, Cagayan de Oro City; renewal of fellowship for study in demography in the Center for Developmental Change at the University of Kentucky; twelve months beginning September 1970.

TRINIDAD S. OSTERIA, Research Instructor, University of the Philippines; fellowship for study in demography in the School of Hygiene and Public Health at The Johns Hopkins University; twelve months beginning April 1970.

Taiwan

MING-CHENG CHANG, Chief, Survey and Research Section, Taiwan Provincial Institute of Family Planning, Taichung; fellowship for study in demography in the Graduate Group in Demography at the University of Pennsylvania; twelve months beginning September 1970.

PAUL KE-CHIH LIU, Associate Professor of Demography, National Taiwan University, Taipei; second renewal of fellowship for study in economics at Michigan State University; four months beginning September 1970.

Thailand

SUCHART PRASITHRATHSIN, Lecturer, Faculty of Social Science, Chiengmai University; fourth renewal of fellowship for study in demography in the Department of Sociology at Brown University; twelve months beginning September 1970.

JAWALAKSANA RACHAPAETAYAKOM, Demographer, Manpower Planning Division, National Economic Development Board, Bangkok; fellowship for study in demography in the Department of Sociology at Brown University, preceded by an English language course at Bucknell University; twelve months beginning September 1970.

Turkey

AYSEL ALPAY, Director, Turkish Demographic Survey, School of Public Health, Ankara; fellowship for study in demography at the London School of Economics; twelve months beginning October 1970.

Vietnam

VU THI MY, Chief, Bureau of Planning and Statistics, Ministry of Health, Saigon; second fellowship for study in demography at the School of Public Health, University of North Carolina; twelve months beginning September 1970.

Europe

Spain

JOSE-MARIA BLANCH, graduate student, University of Southern California; fellowship for study in demography in the Department of Sociology at the University of Southern California; twelve months beginning September 1970.

Switzerland

PIERRE PRADERVAND, special student, University of Michigan; fellowship for study in demography in the Department of Sociology at the University of Michigan; eleven months beginning June 1970.

United Kingdom

IAN DAVID THOMAS, Lecturer, University of Dar es Salaam, Tanzania; fellowship for study in demography at the Office of Population Research at Princeton University; nine months beginning September 1970.

Grants-in-aid and supplementary awards were made to: Eva Bernhardt (Sweden), Ph.D. Candidate at the University of Pennsylvania; Mohamed El-Attar (United Arab Republic), Ph.D. Candidate at the University of Georgia; B. R. Kohli (India), Ph.D. Candidate at the University of Chicago; Ananda Meegama (Ceylon), at the London School of Economics; Princeton University for Father D'Souza of India; Edgardo Santiago (under provisions of Grant #D6798 to the Universidad de Los Andes), at the University of Michigan; and Nancy Williamson (United States of America), Ph.D. Candidate at Harvard University.

Africa

Algeria

ABDELHAMED BENTCHIKOU, Professor, Department of Animal Biology, Ministry of Education, Constantine; fellowship for study of thyroxin on the pituitary during pregnancy at the University of Paris; twelve months beginning July 1970.

South West Africa

WOLFGANG H. HOLTZ, Postgraduate Fellow, University of Göttingen, Germany; renewal of fellowship for study of metabolic changes characterizing sperm maturation in the epididymis of rabbits and bulls in the Department of Animal Science at Cornell University; twelve months beginning April 1970.

United Arab Republic

SALAH KARIM ADEL, Assistant Professor, Department of Obstetrics and Gynecology, Cairo University; renewal of fellowship to continue study of long-term effects of modern contraceptives at the Margaret Sanger Research Bureau; twelve months beginning March 1970.

MOHAMED A. GHONEIM, Assistant Professor, Department of Obstetrics and Gynecology, Cairo University; renewal of fellowship to continue study of physical and chemical changes in cervical mucus at the Margaret Sanger Research Bureau; four months beginning March 1970.

HOURIA I. HASSOUNA, Pathologist, Department of Obstetrics and
90 Gynecology, Cairo University; renewal of fellowship for study of

immunologic impairment of placental function at the Population Council, The Rockefeller University; twelve months beginning April 1970.

NABIL HIDAYET, Resident Registrar, Department of Obstetrics and Gynecology, Ain Shams University Hospital, Cairo; fellowship to study the effect of local and hormonal contraceptives on the female genital tract at St. Mary's Hospital, Manchester; twelve months beginning August 1970.

The Americas

Argentina

DANIEL P. CARDINALI, Instructor, Department of Biology, Salvador University, Buenos Aires; renewal of fellowship to continue post-doctoral Latin American training course in reproductive biology in Buenos Aires; twelve months beginning April 1970.

ROBERTO CERIANI, graduate student, University of California, Berkeley; fellowship for study of the influence of the neuroenvironment surrounding a mammary gland cell on its cellular response to hormones at Centre National de la Recherche Zootechnique, Paris; twelve months beginning October 1970.

Chile

UMBERTO PASTORE, Physician-in-Charge, Gynecology Division, Temuco General Hospital; fellowship for study of the motility of the Fallopian tube and its modification under the action of some contraceptives in the Department of Obstetrics and Gynecology at the University of Michigan Medical Center; twelve months beginning July 1970.

ANDRES TCHERNITCHIN, Research Associate, Institute of Physiology, University of Chile; fellowship for studies of the estrogen acceptor sites at Laboratories for Reproductive Biology, University of North Carolina; twelve months beginning September 1970.

Mexico

JUAN M. MALACARA, Trainee, Instituto Nacional de la Nutricion, Mexico City; renewal of fellowship for study of physiological control of gonadotropin secretion in the estrus cycle of primates at the University of Connecticut Medical School; twelve months beginning March 1970.

Jose L. Solis-Wallckermann, Trainee, Instituto Nacional de la Nutricion, Mexico City, renewal of fellowship to continue study of the isolation and purification of human pituitary gonadotropins at the University of California, San Francisco Medical Center; twelve months beginning March 1970.

Carlos Valverde, postgraduate student, Instituto Nacional de la Nutricion, Mexico City; fellowship for study on the role of dopamine in the regulation of luteinizing hormone in the human in the Department of Medical and Pediatric Specialties at the University of Connecticut; twelve months beginning July 1970.

United States of America

Robert Fiorindo, Fellow, Department of Physiology, University of California, Berkeley; renewal of fellowship for study of the releasing factors of adenohypophysial hormones at the University of Cambridge; twelve months beginning January 1970.

A. Eugene Pekary, graduate student, Biophysics Group, University of California, Berkeley; fellowship for physical and chemical studies on histone IV-glucocorticoid interaction in the Chemistry Department at the University of California, Berkeley; twelve months beginning September 1970.

John J. Rasweiler, graduate student, Department of Physiology, Cornell University; renewal of fellowship to continue studies of reproductive mechanisms in Glossophagine bats at Facultad de Medicina, Universidad del Calle, Colombia; twelve months beginning December 1970.

Carol M. Warner, graduate student, Department of Chemistry, University of California, Los Angeles; fellowship for study of the separation of gametogenesis and meiosis in the Biology Division at Yale University; twelve months beginning September 1970.

Asia

India

Kamla Dhall, Lecturer, Department of Obstetrics and Gynecology, Postgraduate Institute of Medical Education, Chandigarh; fellowship for study of immunologic aspects of infertility and conception control in the Department of Obstetrics and Gynecology at the University of Colorado Medical Center; twelve months beginning September 1970.

SUHASINI DIKSHIT, Assistant Research Officer, Indian Council of Medical Research, Bombay; fellowship for endocrinological studies related to fertility and sterility in the Department of Obstetrics and Gynecology at the University of Michigan Medical Center; twelve months beginning September 1970.

MANJIT S. GREWAL, Assistant Professor, All India Institute of Medical Sciences, New Delhi; fellowship for studies on the role of genetics in reproduction and reproductive abnormalities in the Department of Obstetrics and Gynecology at Columbia University; twelve months beginning September 1970.

ANIL SHETH, Senior Research Officer, Seth G.S. Medical College, Bombay; fellowship for study of radioimmunoassay of gonadotropins in the Department of Pathology at the University of Michigan Medical Center; twelve months beginning September 1970.

Japan

GENICHIRO KONISHI, postgraduate student, Tokyo Medical and Dental University; renewal of fellowship to continue study of interaction of androgens with nuclear proteins of the prostate gland at the Population Council, The Rockefeller University; twelve months beginning April 1970.

SHOICHI MIURA, Instructor, Osaka University Hospital; renewal of fellowship to continue study of induction of protein synthesis and mechanism of hormone action at the Population Council, The Rockefeller University; twelve months beginning November 1970.

NAOKI SATO, Resident, University of Tokyo School of Medicine; renewal of fellowship for study of the mechanism of induction and control of corpus luteum in hypophysectomized monkeys at the Endocrinology Branch of the National Cancer Institute, Bethesda; twelve months beginning July 1970.

Jordan

AIDA NUREDDIN, graduate student, Biochemistry Department, Vanderbilt University, Nashville; fellowship for study of amino acid sequence of one subunit of a human pituitary LH in the Department of Biochemistry at the University of Cambridge; twelve months beginning July 1970.

Korea

SEUNG JO KIM, Assistant Professor, Catholic Medical College, Seoul; fellowship for study of immunologic factors regulating reproduction at the Population Council, The Rockefeller University; twelve months beginning September 1970.

SEON H. SHIN, graduate student, Department of Pharmacology, University of Manitoba, Canada; renewal fellowship to continue study of subcellular localization of gonadotropin releasing factors and prolactin inhibiting factors at the Southwestern Medical School, University of Texas, Dallas; twelve months beginning October 1970.

Taiwan

CHAU-CHUN CHEN, Resident, Department of Obstetrics and Gynecology, Municipal Delmenhorst Hospital, Bonn; fellowship for studies of hormonal contraception at The Tyler Clinic, Los Angeles; twelve months beginning September 1970.

TZU LIN, Instructor, National Defence Medical Center, Taipei; renewal of fellowship to continue study of fractionation and characterization of uterine RNA in the Department of Biology at Temple University; twelve months beginning September 1970.

Thailand

SAMAN PHIROMSAWAT, staff member, Department of Obstetrics and Gynecology, Ramathibodi Hospital, Bangkok; fellowship for fundamental research in biochemistry of reproduction in the Department of Obstetrics and Gynecology at the University of Colorado, Denver; twelve months beginning July 1970.

SURAWAN VORAWAN, staff member, Department of Obstetrics and Gynecology, Vajira Hospital, Bangkok; fellowship for research in biochemistry of reproduction in the Department of Obstetrics and Gynecology at the University of Colorado, Denver; twelve months beginning July 1970.

Europe

Belgium

JEF RAUS, graduate student, Columbia University; renewal of fellowship for study of the biochemical aspects of the interaction of estradiol with specific macromolecules in the Department of Obstetrics and Gynecology at Columbia University; twelve months beginning June 1970.

Czechoslovakia

JAROSLAV KOLENA, Head, Steroid Laboratory, Institute of Experimental Endocrinology, Bratislava; fellowship for studies in the mechanism of luteinization *in vitro* in the Department of Physiology at the University of Pittsburgh; twelve months beginning September 1970.

VLASTA ZBUZKOVA, Research Worker, Faculty of Medicine, Charles University, Prague; renewal of fellowship to continue study of biological effectiveness of DPS-steroid implants at the Population Council, The Rockefeller University; twelve months beginning April 1970.

Romania

AURELIAN GRIGORESCU, Assistant Professor, Department of Endocrinology, University of Bucharest; fellowship for study of the effect of sex hormones on the synthesis of RNA and DNA in target organs at Department of Biological Chemistry, Harvard Medical School; twelve months beginning November 1970.

Switzerland

EDITH KOLB, Fellow, Section of Biochemistry, Mayo Clinic; renewal of fellowship for study of the physical and chemical characterization of lactate dehydrogenase isoenzyme at the University Postgraduate Medical School, Cambridge, England; twelve months beginning September 1970.

United Kingdom

MICHAEL F. TARTTELIN, Fellow, Department of Anatomy, University of California, Los Angeles; fellowship for study of the interrelationship between the hypothalamic regulation of reproductive physiology and food intake in the Department of Anatomy at the University of California, Los Angeles; twelve months beginning September 1970.

West Germany

GISELA EPPLE, Visiting Scientist, University of Pennsylvania; renewal of fellowship for study of chemical communication and its hormonal control in the marmoset monkey at the Monnell Chemical Senses Center, University of Pennsylvania; twelve months beginning April 1970.

Oceania

Australia

COLIN D. NANCARROW, graduate student, University of Adelaide, Glen Osmond; renewal of fellowship for study of the influence of steroid hormones on the methylation and acetylation of nucleic acids in target tissues at the Population Council, The Rockefeller University; twelve months beginning September 1970.

In addition, in 1970, the Bio-Medical Division made the following short-term fellowship awards: Ruth Kurtz (Canada), 3 months; Tamito Noto (Japan), 4 months; Luis Burzio (Chile), renewal for 2 months.

Technical Assistance Fellowships

Africa

Sierra Leone

DINAH EKUNDAYO JARRETT, Obstetrician and Gynecologist-in-charge, Kenema Hospital, Kenema; fellowship for study in public health with emphasis in population in the School of Hygiene and Public Health at The Johns Hopkins University; sixteen months beginning January 1971.

Zambia

SURINDERJIT SINGH BAKHSHI, Medical Officer, Maternal and Child Health Service, Ministry of Health, Kafue; fellowship for study in maternal and child health with emphasis in family planning in the School of Public Health at the University of Michigan; twelve months beginning August 1970.

The Americas

Dominican Republic

MANUEL A. RODRIGUEZ C., Executive Secretary, National Council on Population and Family, Secretariat of State for Health and Public Assistance; fellowship for study in mass communication and family planning in the Department of Communication Arts at Cornell University; twelve months beginning September 1970.

United States of America

GEORGE CERNADA, Population Council Advisor, Taichung, Taiwan; career development fellowship for study in public health in the

School of Public Health at the University of California, Berkeley; twelve months beginning September 1970.

UNIVERSITY OF PITTSBURGH, to enable the Graduate School of Public Health to renew the award of a partial fellowship for study in family planning to Dr. Oswald Jerry Nickens.

JOHN W. RATCLIFFE, Health Education Advisor, Dacca, East Pakistan; career development fellowship for study in public health and population at the School of Public Health at the University of California, Berkeley; twelve months beginning September 1970.

Venezuela

RAMON GONZALEZ C., Medical Director, Venezuelan Family Planning Association, Caracas; fellowship for study in research techniques and public health with emphasis in population and family planning at the School of Public Health at the University of Michigan, preceded by an English course at their English Language Institute; twelve months beginning August 1970.

Asia

India

K. LAKSHMI BAI, Assistant Professor, Medical College, Berhampur, Orissa; fellowship for study in public health with emphasis in family planning at the School of Hygiene and Public Health at The Johns Hopkins University; twelve months beginning September 1970.

AMLA RAMA RAO, Lecturer, Department of Social and Preventive Medicine, Lady Hardinge Medical College, New Delhi; fellowship for study in family planning and population dynamics at the School of Hygiene and Public Health at The Johns Hopkins University; twelve months beginning September 1970.

Iran

KHALIL ASAYESH, Acting Director-General (Technical), Family Planning Division, Ministry of Health and Family Planning, Teheran; fellowship for study in public health and family planning administration at the School of Public Health at the University of North Carolina, preceded by an English language course at North Carolina State University; twelve months beginning September 1970.

GHOLAM-HOSSEIN JALALI, Associate Professor, University of Teheran, School of Public Health, Teheran; fellowship for study in family

planning and public health at the School of Public Health at the University of North Carolina, preceded by an English language course at North Carolina State University; twelve months beginning September 1970.

Hossain Ali Ronaghy, Associate Professor, Pahlavi University, Shiraz; fellowship for study in public health at the School of Hygiene and Public Health at The Johns Hopkins University; ten months beginning September 1970.

Lotfollah Ziai, Physician, Director of Public Health, Sari Mazanderan Province; extension of fellowship for study in public health with emphasis in family planning at the School of Public Health at the University of North Carolina; four months beginning September 1970.

Korea

Kye Choon Ahn, Research Fellow, Department of Preventive Medicine and Public Health, Yonsei University College of Medicine, Seoul; renewal of fellowship for study in population with emphasis in family planning at the Community and Family Study Center at the University of Chicago; nine months beginning September 1970.

Sung Hee Yun, Health Educator, Planned Parenthood Federation of Korea, Seoul; renewal of fellowship for study in health education and population at the School of Public Health at the University of North Carolina; ten months beginning September 1970.

Malaysia

Mohamad Hashim bin Yunus, Head, Information Division, National Family Planning Board, Kuala Lumpur; fellowship for study in family planning communications at the School of Public Health at the University of North Carolina; twelve months beginning August 1970.

Pakistan

*Makhdoom Ali Shah, Research Supervisor, West Pakistan Research and Evaluation Centre, Lahore; renewal of fellowship for study in public health with emphasis in family planning at the School of Hygiene and Public Health at The Johns Hopkins University; twelve months beginning September 1970.

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*Syed Waliullah, Director, Central Evaluation Unit, Directorate of Family Planning, Dacca; fellowship for study in sociology/social work/population in the Department of Sociology at Utah State University; twenty-four months beginning September 1970.

Taiwan

Kung-Kong Chang, Specialist, Public Health Administration, Taipei; renewal of fellowship for study in public health with emphasis in family planning at the School of Public Health at the University of North Carolina; twelve months beginning September 1970.

Thailand

Thassanee Nuchprayoon, Medical Officer, Public Health Division, Municipal Department, Bangkok; fellowship for study in public health with emphasis in family planning at the School of Public Health at Tulane University; twelve months beginning September 1970.

Turkey

Turgut Metiner, Director General, Population Planning, Ministry of Health, Ankara; fellowship for study in maternal and child health with emphasis in family planning at the School of Public Health at the University of California, Berkeley; thirteen months beginning August 1970.

Aydin Onel, Physician, Tulane University; renewal of fellowship for study in maternal and child health with emphasis in population at the School of Public Health at Tulane University; twelve months beginning June 1970.

In addition, in 1970, the Technical Assistance Division made a tuition award to a Canadian and twenty-five short-term training and travel awards. The recipients of the training awards came from the following countries: one each from Brazil, Hong Kong, Pakistan, Philippines, Taiwan, and Turkey; and two from the United States. The travel award recipients have come one each from Colombia, Ecuador, and the United Kingdom; two each from Iran and Kenya; and ten from Korea.

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*Government of Pakistan Fellow—a fellowship program financed by the Ford Foundation and administered by the Population Council, to provide training for personnel in the government of Pakistan's family planning services.

Financial Statements

Auditors' Report

Mr. John D. Rockefeller 3rd,
Chairman of the Board of Trustees,
The Population Council, Inc.:

We have examined the balance sheet of The Population Council, Inc. as of December 31, 1970 and the related statement of changes in funds for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In common with the practice of many nonprofit organizations, income from interest and dividends is recorded when received and expenditures for leasehold improvements and for furniture and equipment are charged to expense when incurred, except as indicated in Note 1. All other transactions are recorded on the accrual basis.

In our opinion, the aforementioned financial statements present fairly the financial position of The Population Council, Inc. at December 31, 1970 and the changes in its funds for the year then ended, in conformity with the accounting principles referred to in the preceding paragraph applied on a basis consistent (except for the change, in which we concur, referred to in Note 1) with that of the preceding year.

Lybrand, Ross Bros. & Montgomery
New York, May 27, 1971.

Balance Sheet, December 31, 1970

Assets:	General and Operating Funds	Reserve Fund	Combined
Cash	$ 855,830	$ 2,587	$ 858,417
Marketable securities, at cost, or at market at date of gift (market at December 31, 1970: General and Operating Funds, $3,873,514; Reserve Fund, $4,238,278) as annexed	3,915,255	3,169,912	7,085,167
Grants receivable	17,850,694		17,850,694
Inventory of books, at cost	57,073		57,073
Advances and prepaid expenses	151,135		151,135
Laboratory leasehold and equipment (Note 1)	2,357,432		2,357,432
	$25,187,419	$3,172,499	$28,359,918
Liabilities and Funds:			
Accounts payable	$ 620,604		$ 620,604
Deferred income (Note 2)	364,631		364,631
Fund balances:			
Unpaid appropriations	11,172,975		11,172,975
Laboratory leasehold and equipment fund (Note 1)	2,357,432		2,357,432
Unappropriated (Note 3)	10,671,777	$3,172,499	13,844,276
	$25,187,419	$3,172,499	$28,359,918

The accompanying notes are an integral part of the financial statements.

Statement of Changes in Funds for the year ended December 31, 1970

	General and Operating Funds	Reserve Fund	Combined
Balances, beginning of year:			
Unpaid appropriations	$12,051,013		$12,051,013
Unappropriated	15,189,817	$3,056,929	18,246,746
As previously reported	27,240,830	3,056,929	30,297,759
Laboratory leasehold and equipment fund (Note 1)	1,000,000		1,000,000
As restated	28,240,830	3,056,929	31,297,759
Additions:			
Grants and gifts, as annexed	9,905,264		9,905,264
Less, Deferred income (Note 2)	221,438		221,438
	9,683,826		9,683,826
Interest and dividends (Note 4)	224,048		224,048
Gain (loss) on sale of securities	(135,986)	115,570	(20,416)
Refunds on appropriations paid in prior years	19,944		19,944
Recovery of operating expenses	227,807		227,807
Miscellaneous income	14,686		14,686
	10,034,325	115,570	10,149,895
	38,275,155	3,172,499	41,447,654

Statement of Changes in Funds (continued)

	General and Operating Fund	Reserve Fund	Combined
Deductions:			
Appropriations authorized, net of $689,564 canceled or lapsed	10,181,495		10,181,495
Add, Excess of payments over net appropriations	878,038		878,038
Appropriations paid	11,059,533		11,059,533
Less, Payments for laboratory leasehold and equipment (Note 1)	1,357,432		1,357,432
	9,702,101		9,702,101
Operating expenses, as annexed	4,370,870		4,370,870
	14,072,971		14,072,971
Balances, end of year:			
Unpaid appropriations	11,172,975		11,172,975
Laboratory leasehold and equipment fund (Note 1)	2,357,432		2,357,432
Unappropriated (Note 3)	10,671,777	3,172,499	13,844,276
	$24,202,184	$3,172,499	$27,374,683

The accompanying notes are an integral part of the financial statements.

Notes to Financial Statements

1. In prior years, it has been the Council's policy to charge expenditures for leasehold improvements and for furniture and equipment to expense when incurred. In 1969, the Council negotiated a lease agreement with The Rockefeller University for laboratory space in a new building being constructed by the University in New York City. The initial term of the lease is 25 years. As partial consideration for the lease, the Council agreed to contribute $1,800,000 to the University towards the construction costs of the building. At December 31, 1969, an appropriation of this amount had been recorded by the Council and $1,000,000 of the appropriation had been paid to the University. Under its then existing policy, no asset was recorded for this payment.

   The Council is also required under the lease to pay the cost of preparing and equipping the leased space to meet its requirements. Such cost has been estimated in 1970 to be approximately $2,200,000 and this amount was appropriated.

   In 1970, the Council revised its accounting policy with respect to the total cost of this leased space and equipment, and is now treating such cost, as incurred, as an asset (laboratory leasehold and equipment) to be charged to expense over the initial term of the lease or the useful life of the respective assets, if shorter. As a result, these costs incurred to December 31, 1970, amounting to $2,357,432 including $1,000,000 paid in 1969, are included in assets and fund balances in the accompanying financial statements.
2. Deferred income represents the portion of grants received but not spent at December 31, 1970, which will be available to the Council for future recovery of operating expenses.
3. The unappropriated fund balance of the General and Operating Funds at December 31, 1970 is available for the following:

Restricted purposes designated by grantors:			
For 1971		$2,801,213	
For subsequent years		1,367,452	$ 4,168,665
General purposes of the Council:			
For 1971		5,271,473	
For subsequent years		1,500,000	
		6,771,473	
Less, Excess of amounts spent or appropriated over funds available:			
Prior to 1970	$137,656		
Year 1970	130,705	268,361	6,503,112
			$10,671,777*

4. Interest and dividends received from Reserve Fund investments are credited to the General Fund and amounted to $121,046 in 1970.

5. The Population Council receives funds from The Ford Foundation to be used in accordance with specific directions for purchasing equipment, supplies and books for Indian grantees of the Foundation. Since such amounts are segregated from the Council's other accounts and are not available for use in connection with appropriations of the Council, amounts relating to this fund have been excluded from the accompanying statements. A summary of the changes in the fund during 1970 follows:

Balance, January 1, 1970	$ 33,281
Received:	
From The Ford Foundation	308,672
Interest on certificates of deposit	396
	342,349
Disbursed for benefit of Indian grantees	101,219
Balance, December 31, 1970	$241,130

6. The Council filed Form 4653, Notification Concerning Foundation Status, with the Internal Revenue Service in November 1970, stating that it is a publicly-supported organization rather than a private foundation. Although a determination letter in reply to this filing has not been received from the Service, no provision for federal excise tax applicable to a private foundation was considered necessary for the year ended December 31, 1970.

**Includes $2,299,701 of appropriations voted by the Board of Trustees in 1970 but applicable to 1971 programs and recorded as appropriations in that year.*

Grants and Gifts Received or Accrued for the year ended December 31, 1970

Vivian B. Allen Foundation		$ 150,000
The Ford Foundation		2,896,500
General Service Foundation		75,000
Gleich Foundation		2,000
Independence Foundation		100,000
International Bank for Reconstruction and Development		50,000
Mrs. Jean Mauze		151,460
Rockefeller Brothers Fund, Inc.		500,000
Mr. David Rockefeller, Jr.		1,052
Mr. John D. Rockefeller 3rd		507,656
Mr. John D. Rockefeller 3rd and Trusts		667,726
The Scaife Family		2,000,000
Mr. John Spencer		188,500
United Nations Fund for Population Activities		100,000
United States Government Agencies:		
Agency for International Development	$2,435,000	
National Institutes of Health	78,954	2,513,954
Others		1,416
		$9,905,264

Operating Expenses for the year ended December 31, 1970

Salaries		$1,851,597
Pensions and other employee benefits		314,292
Office operating expenses		216,822
Travel		197,292
Meetings and conferences		54,895
Building and occupancy		326,889
Office equipment and maintenance		84,310
Books and equipment		64,756
Laboratory supplies, equipment and maintenance		178,611
Subscriptions and journals		17,019
Printing and publications		22,563
Professional fees		31,879
Miscellaneous		37,809
		3,398,734
Special programs:		
Salaries	$ 546,579	
Pensions and other employee benefits	92,613	
Printing and publications	470,198	
Research and other services purchased	356,977	
Travel and meetings	36,447	
Laboratory supplies, equipment and maintenance	159,937	
Miscellaneous	58,855	
	1,721,606	
Less, Charges to authorized appropriations	749,470	972,136
		$4,370,870

Marketable Securities December 31, 1970

	Principal Amounts or Shares	Book Amounts*	Market†
General and Operating Funds:			
Bonds:			
U. S. Treasury Bills:			
Due January 21, 1971	$ 40,000	$ 39,399	$ 39,399
Due February 18, 1971	750,000	742,678	742,678
Due March 11, 1971	400,000	395,124	395,124
		1,177,201	1,177,201
Commercial paper:			
International Harvester Credit Corporation:			
Due January 11, 1971	500,000	500,000	500,000
Due January 21, 1971	175,000	175,000	175,000
Due March 8, 1971	600,000	600,000	600,000
Singer Credit Corporation:			
Due January 21, 1971	500,000	500,000	500,000
Due February 1, 1971	300,000	300,000	300,000
		2,075,000	2,075,000
Common stocks:			
Standard Oil Company (New Jersey)	2,500	161,413	183,438
Pennzoil United, Inc.	10,000	313,141	340,000
Pan Ocean Oil Corporation	10,000	188,500	97,875
		663,054	621,313
		$3,915,255	$3,873,514

Marketable Securities (continued)

	Principal Amounts or Shares	Book Amounts*	Market†
Reserve Fund:			
Bonds:			
U. S. Treasury Bills:			
Due January 14, 1971	$400,000	$ 397,206	$ 397,206
Due February 18, 1971	230,000	228,692	228,692
		625,898	625,898
Common stocks:			
American Telephone & Telegraph Company	5,800	288,734	283,475
Chase Manhattan Corporation	5,500	233,005	281,875
Eastman Kodak Company	6,613	150,697	500,108
General Electric Company	3,300	239,837	309,788
Government Employees Insurance Co.	5,406	281,729	277,058
Houston Lighting & Power Company	6,700	307,751	307,363
International Business Machines Corp.	2,600	71,955	826,150
International Telephone & Telegraph Corporation	5,500	301,198	278,438
McGraw-Hill, Inc.	12,500	355,302	234,375
U. S. Gypsum Co.	5,000	313,806	313,750
		2,544,014	3,612,380
		$3,169,912	$4,238,278

**Book amounts represent cost of securities purchased or market price of securities at date received as a gift.*

†Market represents amounts at closing sales prices on December 31, 1970, or, in the absence of recorded sales, at bid prices on that date.

Grants and Authorizations for the year ended December 31, 1970

Africa

Algeria
Ministry of Finance and Planning, Algiers
A demographic consultant on studies of the relationship between population growth and economic planning, continued

Chad
Chad National Institute for the Human Sciences, Fort Lamy
Knowledge, attitudes, and practices project

Dahomey
Ministry of Foreign Affairs, Porto Novo
A mission sent to review the demographic situation and to advise on the development of a plan for work in the interrelated fields of economic, social, medical, and population change

Ethiopia
Haile Selassie I University, Institute of Ethiopian Studies, Addis Ababa
A knowledge, attitudes and practices study for eighteen months

Ghana
Korle Bu Hospital, Accra
For the purchase of IUDs
A postpartum family planning program, continued
Ministry of Finance and Economic Planning, Ghana National Family Planning Program, Accra
A postpartum family planning program in the Effia Nkwanta and Komfo Anokye Hospitals, for eighteen months
University of Ghana, Accra
A demographic program, for five years, continued

Kenya
Ministry of Health, Nairobi
The services and office expenses of a resident family planning advisor
University of Nairobi, Nairobi
The development of computer capabilities for teaching and research in demography

	Unpaid Jan. 1, 1970	Changes During Year: Grants (Cancellations)	Payments (Refunds)	Unpaid Dec. 31, 1970
	$ 12,353.86	$ (12,745.52)	$ (391.66)	——
	4,500.00	——	4,500.00	——
	2,448.38	(1,023.38)	1,425.00	——
	19,441.00	——	14,041.00	$ 5,400.00
	——	330.00	——	330.00
	527.89	26,290.00	4,723.56	22,094.33
	——	47,450.00	9,137.84	38,312.16
	117,000.00	——	25,000.00	92,000.00
	42,348.18	——	42,348.18	——
	——	1,063.00	1,063.00	——

Grants and Authorizations for the year ended December 31, 1970 (continued)

Africa (continued)

Kenya (continued)
University of Nairobi, Nairobi
The preparation for publication of the proceedings of a seminar on the interrelation of population growth and economic development in tropical Africa
A research fellow to the Institute for Developmental Studies
A resident advisor on teaching and research in demography, from August, 1968 to August, 1969, continued

Morocco
Ministry of Planning, Statistics Division, Rabat
Travel by staff to Ministry of Planning and Finance, Algiers, to review the Algerian demographic survey
Ministry of Public Health, Rabat
A family planning program continued

Nigeria
Ahmadu Bello University, School of Medicine, Zaria
The development of a demographic training and research program
Lagos State Ministry of Health and Social Welfare, Lagos
Postpartum family planning programs, continued
For the purchase of IUD's
University of Ibadan, Ibadan
The metabolism of progestational agents (megestrol acetate)
A postpartum family planning program, continued
For the purchase of IUDs
University of Ife, Ile-Ife
A demographic regional representative for Africa, continued
A demographic teaching and research program, for three years from January, 1969
The evaluation of a proposed rural family planning project at Zuma Memorial Hospital, Irrura
A resident advisor in demography, for two years from August, 1969
University of Lagos, School of Social Studies, Lagos
A resident advisor to the Human Resources Research Unit
Zuma Memorial Hospital, Irrura
The development of a rural family planning project

	Changes During Year			
	Unpaid Jan. 1, 1970	Grants (Cancellations)	Payments (Refunds)	Unpaid Dec. 31, 1970
	——	$ 990.00	$ 990.00	——
	$ 23,088.95	——	21,862.36	$ 1,226.59
	8,979.26	(7,495.50)	1,483.76	——
	1,030.40	(88.00)	942.40	——
	——	41,000.00	18,992.75	22,007.25
	——	40,000.00	——	40,000.00
	7,450.00	36,705.00	16,001.67	28,153.33
	——	630.00	——	630.00
	5,000.00	——	2,658.07	2,341.93
	16,810.00	28,350.00	14,528.00	30,632.00
	——	630.00	——	630.00
	7,293.18	——	7,293.18	——
	97,063.87	——	10,700.95	86,362.92
	8,250.00	——	2,750.00	5,500.00
	74,790.58	——	30,703.23	44,087.35
	63,500.00	——	15,605.23	47,894.77
	32,700.00	——	10,650.00	22,050.00

Grants and Authorizations for the year ended December 31, 1970 (continued)

Africa (continued)

Sierra Leone
Central Statistics Office, Freetown
A combined program for the improvement of civil registration procedures and the estimation of population growth, fertility and mortality in Sierra Leone
University of Sierra Leone, Fourah Bay College, Freetown
A resident advisor on teaching and research in demography, continued
A special analysis of census data to determine fertility rates for various ethnic groups in Sierra Leone, for five months

Tanzania
Bureau of Statistics, Dar es Salaam
Magnetic tapes for storing data from the 1967 census
University of Dar es Salaam, Dar es Salaam
Internal migration and its demographic implications in Tanzania, beginning January 1, 1971
A resident advisor in demography
A sample vital registration scheme, continued

Tunisia
Ministry of National Education, Tunis
An educational advisor
Ministry of Public Health, Tunis
A demographic advisor and short-term consultant on the measurement and evaluation of family planning, continued
A national program on family planning
A resident field associate in North Africa, continued
A resident medical advisor, continued
University of Tunis, Institute of Statistical Planning and of Legal, Economic and Social Studies, Tunis
Demographic training and research, for two years

Uganda
Makerere University, Kampala
A resident lecturer on demography, continued
Vital registration and differential growth in the regions of Uganda
Taber, Mr. Stephen, Makerere University, Kampala
A demographic survey carried out in a rural health center in Uganda

	Changes During Year			
Unpaid Jan. 1, 1970	Grants (Cancellations)		Payments (Refunds)	Unpaid Dec. 31, 1970
——	$ 89,700.00		——	$ 89,700.00
$ 21,871.41	35,000.00		$ 25,200.02	31,671.39
——	726.00		726.00	——
——	1,060.00		920.00	140.00
——	7,212.00		3,570.00	3,642.00
79,321.40	——		21,673.48	57,647.92
——	9,200.00		9,200.00	——
28,386.43	——		19,898.07	8,488.36
3,693.22	(3,973.22)		(280.00)	——
2,998.13	——		6,872.22	(3,874.09)
30,226.07	(30,924.54)		(698.47)	——
32,043.05	(33,108.34)		(1,065.29)	——
——	13,500.00		3,375.00	10,125.00
56,559.28	——		23,828.43	32,730.85
34,300.00	——		13,502.13	20,797.87
——	4,000.00		2,213.28	1,786.72

Grants and Authorizations for the year ended December 31, 1970 (continued)

Africa (continued)

United Arab Republic

Hefnawi, Dr. Fouad, Al-Azhar University, Cairo
A travel and study award to enable Dr. Hefnawi to present a paper at the Sixth World Congress of Obstetrics and Gynaecology, New York City, April 12–18, 1970

United Nations Regional Demographic Centre, Cairo
Research on the economically active population of the Middle East, continued

Asia

Ceylon

Ministry of Health, Colombo
A family planning program, for two years, continued

University of Ceylon, Colombo
A follow-up study of family planning users and a field study of the response to family planning education in Colombo, continued

Hong Kong

Hong Kong Family Planning Association, Hong Kong
A colony-wide postpartum family planning program
IUDs and inserters for the postpartum family planning program
A postpartum follow-up survey

India

All-India Institute of Hygiene and Public Health, Calcutta
Assistance in the publication of *A Rural Field Study of Population Control, Singu*

All-India Institute of Medical Sciences, New Delhi
The mechanism of the action of hormones, continued

Banaras Hindu University, Varanasi
A demographic research center, continued
The regulation of fertility in mammals by olfactory pheromones, continued

Gokhale Institute of Politics and Economics, Poona
To assist in the publication of the book, *Prospects of Population Control—Evaluation of Contraception Activity (1951–1964)*

Hingorani, Dr. Vera, All-India Institute, New Delhi
Study and travel funds to visit various population and family planning centers on the east coast

	Changes During Year			
Unpaid Jan. 1, 1970	Grants (Cancellations)		Payments (Refunds)	Unpaid Dec. 31, 1970
——	$ 1,100.00	$	250.00	$ 850.00
——	28,000.00		28,000.00	——
$ 131,502.00	——	$	13,537.89	$ 117,964.11
4,608.00	$ (4,608.00)		——	——
52,032.41	——		38,350.00	13,682.41
——	1,100.00		35.00	1,065.00
——	3,300.00		3,300.00	——
1,000.00	——		1,000.00	——
12,316.26	34,000.00		35,285.44	11,030.82
6,095.00	——		4,046.00	2,049.00
2,927.83	——		1,685.35	1,242.48
——	1,350.00		——	1,350.00
——	600.00		600.00	——

Grants and Authorizations for the year ended December 31, 1970 (continued)

Asia (continued)

India (*continued*)
Institute of Post Graduate Medical Education and Research, Chandigarh
The effects of IUDs in primates and women, continued
Jadavpur University, Jadavpur
A demographic research unit, continued
Karnatak University, Dharwar
Comparative histochemical studies on ovaries of some vertebrates, continued
Ministry of Health and Family Planning, New Delhi
An expanded postpartum family planning program (50 hospitals)
A resident advisor to the All-India Postpartum Program
Pran Talwar, Dr. G., All-India Institute of Medical Sciences, New Delhi
Travel grants to participate in symposia
Prasad, Dr. M.R.N., University of Delhi, Delhi
Travel and study award for visits to reproduction research centers in the United States
University of Bombay, Bombay
Demographic training and research, for five years beginning April, 1969, continued
The expansion of staff and activities for demographic training and research in the Department of Economics
University of Delhi, Delhi
The comparative physiology of reproduction

Indonesia
Indonesian Planned Parenthood Association, Djakarta
A postpartum family planning program in three Djakarta hospitals, continued
Ministry of Health, Djakarta
IUDs and inserters for a large-scale family planning program
University of Indonesia, Djakarta
Spermatogenesis by *in vitro* techniques, continued
University of Indonesia, Institute of Demography, Djakarta
A research and graduate training program in demography
University of Pajajaran, Bandung
A postpartum family planning program, continued
A postpartum follow-up survey

Iran
Farah Maternity Hospital, Teheran
A postpartum family planning program, for sixteen months, continued
A postpartum follow-up survey

	Changes During Year			
	Unpaid Jan. 1, 1970	Grants (Cancellations)	Payments (Refunds)	Unpaid Dec. 31, 1970
	$ 3,160.23	——	——	$ 3,160.23
	2,617.00	——	$ 2,617.00	——
	5,308.43	——	1,272.54	4,035.89
	56,190.67	——	(560.73)	56,751.40
	92,161.87	——	50,194.27	41,967.60
	729.80	$ (729.80)	——	——
	——	1,000.00	1,000.00	——
	31,161.00	——	——	31,161.00
	15,000.00	——	5,000.00	10,000.00
	15,000.00	——	1,867.50	13,132.50
	38,225.25	(11,400.00)	26,565.25	260.00
	——	9,000.00	8,713.85	286.15
	2,439.21	(2,439.21)	——	——
	——	20,000.00	10,000.00	10,000.00
	31,110.00	14,870.00	22,545.00	23,435.00
	——	1,975.00	1,975.00	——
	26,457.27	59,800.00	30,935.00	55,322.27
	——	8,150.00	8,150.00	——

Grants and Authorizations for the year ended December 31, 1970 (continued)

Asia (continued)

Iran (*continued*)
Ministry of Health, Teheran
A family planning information and education project in the Province of Isfahan
IUDs and inserters for the family planning program
A national family planning program, continued
Postpartum family programs in four hospitals and nine maternal and child health clinics
A resident advisor on information and education to the Ministry, for nine months
The services and office expenses of a resident advisor, for sixteen months

Israel
Hadassah Medical Organization, Jerusalem
Suppressing and stimulating influences on reproductive function
The Hebrew University, Jerusalem
The specificity of indirect criteria for ovulation in the human female
Weizmann Institute of Science, Rehovoth
A research program in reproductive biology, continued

Japan
Gunma University, Maebashi
Hypothalamic follicle stimulating hormone and luteinizing hormone releasing factors
Iwate Medical University, Morioka, Iwate
The gonadotropin-inhibiting factor and the pineal gland
Keio University, School of Medicine, Tokyo
In vitro maturation and fertilization of follicular oocytes
Kyoto University, Kyoto
The analysis of the early human intrauterine population
Niigata University, School of Medicine, Niigata
The induction of ovulation by the stimulation of the sexual center
Tokushima University, School of Medicine, Tokushima
The relationship between anti-sperm antibodies and sterility, continued
University of Tokyo, Tokyo
The hypothalamic control of gonadotropin function of the anterior pituitary
Waseda University, Tokyo
The hypothalamic control of adeno-hypophysial activity, continued

	Changes During Year		
Unpaid Jan. 1, 1970	Grants (Cancellations)	Payments (Refunds)	Unpaid Dec. 31, 1970
——	$ 58,300.00	$ 29,248.76	$ 29,051.24
$ 2,280.20	(2,280.20)		
17,540.78	65,275.00	30,802.10	52,013.68
104,862.54	(104,862.54)	——	——
——	40,000.00	28,629.19	11,370.81
50,861.67	85,000.00	64,575.65	71,286.02
——	51,000.00	25,000.00	26,000.00
——	12,000.00	12,000.00	——
243,500.00	——	192,000.00	51,500.00
8,500.00	——	8,500.00	——
——	12,500.00	12,500.00	——
10,200.00	——	10,200.00	——
——	10,000.00	10,000.00	——
——	9,900.00	9,900.00	——
——	6,000.00	6,000.00	——
——	10,000.00	10,000.00	——
——	18,000.00	9,000.00	9,000.00

Asia (continued)

Korea

Bureau of Statistics, Economic Planning Board, Seoul
A resident advisor, for two years, continued

Hong Ik University, Seoul
The impact of population growth on economic development in Korea

Hong, Dr. Sung-Bong, Seoul
A travel grant to visit Japan to obtain additional data on abortion mortality and morbidity, continued

Institute of Population Problems, Seoul
The publication of the *Journal of Population Studies*, numbers 10 and 11, and the annual volume of Korean translations of demographic articles originally written in English

The Korea Choongang Educational Foundation, Seoul
A travel grant to enable international participants to attend a four-day conference on population planning and economic development

Kyungpook National University, Taegu
An experimental program in integration of maternal and child health care and family planning in Kyung San Gun

Ministry of Health and Social Affairs, Seoul
A resident advisor on family planning, continued
The maintenance and activities of the Population Council office, continued
A resident advisor on family planning, continued
A training associate to the Ministry

Planned Parenthood Federation of Korea, Seoul
The Data Processing Section of the National Family Planning Center for the Ministry of Health and Social Affairs, for eighteen months
Evaluation, information and education activities of Korea's national family planning program undertaken through the Ministry of Health and Social Affairs
Family planning activities of the Urban Population Studies Center, School of Public Health, and of the Department of Urology, Seoul National University
Local costs of a workshop on family planning evaluation held in January 1970
A national family planning program undertaken through the Ministry of Health and Social Affairs
Pill evaluation studies and publication on the economic aspects of population, continued

	Changes During Year			
Unpaid Jan. 1, 1970	Grants (Cancellations)	Payments (Refunds)	Unpaid Dec. 31, 1970
$ 18,199.97	——	$ 18,199.97	——
——	$ 970.00	970.00	——
188.90	(188.90)	——	——
——	6,000.00	6,000.00	——
5,375.00	(1,272.32)	4,102.68	——
——	22,960.00	22,960.00	——
22,418.75	——	22,418.75	——
27,953.62	35,000.00	33,308.81	$ 29,644.81
28,800.00	40,000.00	35,813.12	32,986.88
34,475.43	——	12,098.05	22,377.38
——	51,564.00	25,780.00	25,784.00
——	68,122.00	——	68,122.00
17,071.70	——	17,071.70	——
16,000.00	(1,554.00)	14,446.00	——
199,696.32	125,353.00	225,399.43	99,649.89
15,210.00	——	15,210.00	——

Asia (continued)

Korea (continued)

Seoul National University, Seoul
- The development of a census volume for the Population Studies and Development Center, continued
- General support for the Population Studies and Development Center
- The planning and administration, in cooperation with the Bureau of Statistics, of a monograph series based on the 1966 Korean Census of Population, continued

Seoul National University, College of Medicine, Seoul
- A study of the relationships between postpartum family planning and various levels of delivery care in an urban setting, for thirteen months

Seoul Women's College, Seoul
- Fertility trends and depopulation in rural areas

Woo Sok University Medical College, Seoul
- Surgical intervention for transient occlusion of the lumen of ductus deferens

Yonsei University, Center for Population and Family Planning, Seoul
- A four-day conference on family planning in nursing education, July 1970
- A research and action family planning program in Kyunggi Province and the development of the Center

Yonsei University, College of Medicine, Seoul
- The nutrition of rabbit embryos and human oocytes
- An oral contraceptive monitoring study, continued

Yonsei University, Department of Preventive Medicine and Public Health, Seoul
- Assistance in strengthening activities in population and family planning, continued

Malaysia

National Family Planning Board, Kuala Lumpur
- The Second East Asia Population Conference held March 17–25, 1970

Pakistan

Jinnah Hospital, Karachi
- A postpartum follow-up survey

Ministry of Health, Labor and Social Welfare, Karachi
- The research and training component of a national family planning program

	Unpaid Jan. 1, 1970	Changes During Year: Grants (Cancellations)	Changes During Year: Payments (Refunds)	Unpaid Dec. 31, 1970
	$ 2,113.96	$ (2,113.96)	———	———
	———	76,500.00	$ 26,716.72	$ 49,783.28
	15,000.00	———	———	15,000.00
	———	56,015.00	42,000.00	14,015.00
	———	6,329.00	6,329.00	———
	3,400.00	———	100.00	3,300.00
	———	8,520.00	8,520.00	———
	67,000.00	———	65,976.00	1,024.00
	10,000.00	———	5,622.08	4,377.92
	24,766.26	———	———	24,766.26
	4,652.83	(463.78)	4,189.05	———
	15,000.00	———	15,000.00	———
	———	2,000.00	———	2,000.00
	112,301.63	———	106,145.69	6,155.94

Asia (continued)

Pakistan (*continued*)
Pakistan Family Planning Council, Karachi
Support for participants of the International Family Planning Conference, held in Dacca in early 1969
Pakistan Institute of Development Economics, Karachi
Demographic advisors for studies on the current rates of population growth in Pakistan, continued
Support for the staff and activities of the Demographic Section, for five years, continued

Philippines
Commission on Population, Rizal
IUDs and inserters for a family planning program
Ministry of Health, Manila
IUDs and inserters for a family planning program
Philippine Medical Association, Manila
A series of family planning forums for local medical societies throughout the Philippines beginning January 1970
University of the Philippines, College of Medicine, Manila
A microdose progestin study, continued
University of the Philippines, Fabella Memorial Hospital, Manila
A postpartum family planning program, continued
A postpartum follow-up survey
For the purchase of IUDs
University of the Philippines, Philippine General Hospital, Manila
A postpartum family planning program, for fifteen months, continued

Taiwan
American Bureau for Medical Aid to China, Taipei
A maternal and child health demonstration project at the National Defense Medical Center
Taiwan Provincial Government, Department of Health, Taichung
A resident advisor on family planning administration, continued
A resident advisor on health education, continued
A training associate
Joint Commission on Rural Reconstruction, Taipei
The expansion of training programs for East Asia
An experimental sterilization program
The improvement of household registration statistics during the period 1969–1971 and support for the annual *Demographic Fact Book* and *Monthly Bulletin*, continued

	Changes During Year			
	Unpaid Jan. 1, 1970	Grants (Cancellations)	Payments (Refunds)	Unpaid Dec. 31, 1970
	$ 6,417.80	——	——	$ 6,417.80
	3,023.86	$ (3,023.86)	——	——
	67,929.28	——	$ 9,436.01	58,493.27
	——	8,413.00	7,731.26	681.74
	——	8,395.00	8,012.55	382.45
	——	5,000.00	5,000.00	——
	——	8,459.00	8,459.00	——
	43,659.00	79,880.00	35,439.33	88,099.67
	——	3,800.00	3,800.00	——
	——	2,570.00	——	2,570.00
	8,497.00	22,898.00	14,349.00	17,046.00
	——	25,000.00	25,000.00	——
	27,095.40	57,500.00	50,097.71	34,497.69
	38,560.73	——	32,654.95	5,905.78
	25,501.99	——	22,678.94	2,823.05
	52,903.99	——	2,110.10	50,793.89
	——	25,000.00	6,250.00	18,750.00
	24,050.00	——	12,025.00	12,025.00

Grants and Authorizations for the year ended December 31, 1970 (continued)

Asia (continued)

Taiwan (continued)
Joint Commission on Rural Reconstruction, Taipei
National family planning action and research programs, continued
The partial cost of computer operations
Joint Commission on Rural Reconstruction, Taiwan Institute of Family Planning, Taipei
Experimental program designed particularly to reach younger women
A research and evaluation program
National Taiwan University, College of Medicine, Taipei
The effect of various contraceptive progestins on the *in vitro* conversion of pregnenolone to progesterone by the ovary
Endocrine function during contraceptive procedures, continued
The hypothalamus hypophysial-ovarian function of senile female rats

Thailand
Chulalongkorn University, Institute of Population Studies, Bangkok
The advisory service of Professor Sidney Goldstein in conjunction with a longitudinal study of demographic, economic and social change
A field associate, continued
General support
A longitudinal study of demographic, economic and social change, continued
A resident advisor, continued
Chulalongkorn University Hospital, Bangkok
A postpartum family planning program, for one year, continued
Mahidol University, Faculty of Medicine and Siriraj Hospital, Bangkok
A postpartum family planning program at Siriraj Hospital, continued
Ministry of Public Health, Bangkok
Assistance to the family health program
A family planning program, continued
The maintenance and activities of the Population Council office in Bangkok, continued
A medical consultant, continued
A postpartum follow-up survey
A resident medical advisor, continued
Ministry of Public Health, Department of Health, Maternal and Child Health Division, Bangkok
A postpartum family planning program, continued
Ministry of Public Health, Department of Medical Services, Bangkok
Effect of oral contraceptives on patients with known liver fluke disease
A postpartum program in eight provincial hospitals, continued

	Unpaid Jan. 1, 1970	Changes During Year: Grants (Cancellations)	Changes During Year: Payments (Refunds)	Unpaid Dec. 31, 1970
	$ 153,675.72	$ (1,691.75)	$ 127,621.54	$ 24,362.43
	77,715.00	——	75,430.00	2,285.00
	——	66,000.00	33,000.00	33,000.00
	——	42,000.00	42,000.00	——
	9,000.00	——	5,000.00	4,000.00
	271.63	(253.62)	18.01	——
	1,240.21	——	——	1,240.21
	——	5,550.00	4,021.74	1,528.26
	14,232.45	27.000.00	17,298.46	23,933.99
	33,750.00	——	11,250.00	22,500.00
	——	24,000.00	——	24,000.00
	72,763.24	45,000.00	72,177.49	45,585.75
	39,875.12	——	17,037.65	22,837.47
	12,000.00	20,880.00	5,510.00	27,370.00
	——	69,994.00	69,994.00	——
	12,593.90	——	——	12,593.90
	29,156.79	——	15,115.94	14,040.85
	8,100.00	10,800.00	10,800.00	8,100.00
	——	11,400.00	11,400.00	——
	21,324.99	44,729.73	40,760.51	25,294.21
	——	29,470.00	10,500.00	18,970.00
	——	5,500.00	5,500.00	——
	4,400.00	35,450.00	17,558.50	22,291.50

Asia (continued)

Thailand (*continued*)
Ministry of Public Health, Department of Medical Services, Women's Hospital, Bangkok
A postpartum family planning program, continued
National Economic Development Board, Bangkok
A population program including the completion of a migration study, a population seminar and a study tour in Malaysia, commencing June 1970
A resident demographic consultant, continued
National Research Council, Bangkok
A longitudinal study of rural labor utilization, manpower development, farm and household income and expenditures
A resident consultant, continued
Vajira Hospital, Bangkok
A postpartum family planning program, continued
Varavudhi, Dr. Puttipongse, Bangkok
Travel award to study at Juntendo University, Tokyo, Japan

Turkey
Ankara Maternity Hospital, Ankara
A postpartum follow-up survey
Ataturk University, Erzurum
A family planning program in Erzurum Province in cooperation with the Government Health Services, continued
Ministry of Health and Social Assistance, Ankara
The maintenance and activities of the Population Council office, continued
A national family planning program, continued
The purchase of statistical equipment
A resident medical advisor, continued
Ministry of Health and Social Assistance, Research and Family Planning Project, Tarsus
A research and demonstration family planning project, continued
University of Istanbul, Istanbul
The expansion of processing studies at the computation center of the Faculty of Economics

Vietnam
Ministry of Health, Saigon
IUDs and inserters for family planning programs

	Unpaid Jan. 1, 1970	Changes During Year: Grants (Cancellations)	Payments (Refunds)	Unpaid Dec. 31, 1970
	——	$ 20,008.00	$ 9,227.02	$ 10,780.98
	——	2,277.00	2,277.00	——
	$ 22,180.78	45,000.00	35,210.72	31,970.06
	——	10,000.00	10,000.00	——
	7,288.08	(5,464.34)	1,823.74	——
	10,000.00	9,969.00	9,422.00	10,547.00
	——	431.20	431.20	——
	——	7,200.00	7,200.00	——
	12,500.00	(12,500.00)	——	——
	67,662.82	(2,194.25)	45,194.73	20,273.84
	81,719.39	(55,119.09)	26,600.30	——
	431.66	(431.66)	——	——
	36,450.77	——	36,450.77	——
	13,000.00	(13,000.00)	——	——
	——	6,350.40	6,350.40	——
	——	4,330.00	3,968.21	361.79

Grants and Authorizations for the year ended December 31, 1970 (continued)

Asia (continued)

Vietnam (*continued*)
Ministry of Health, Saigon
Observation tours in Taiwan and South Korea for Vietnamese family planning leaders and government officials, continued
Special Fund for Contraceptive Supplies
The purchase of small orders of supplies

Central and Latin America

Argentina
Institute of Medical Investigations, Buenos Aires
Experimental orchitis in primates including the immunological and biochemical aspects
Mercedes and Martin Ferreyra Institute of Medical Investigation, Cordoba
Extrahypothalamic central nervous influence on release of gonadotropins
National Council of Scientific and Technical Investigations, Buenos Aires
Activity, isolation and ultra-structure of the XY-pair of chromosomes from spermatocytes
Antigonadal antibodies and sexual development
Clinical and experimental evaluation of contraceptive agents, continued
The ovum after fertilization and before implantation
The single seminal tubule of the rat: passage and distribution of charged and uncharged substances
National University of Cordoba, Cordoba
A second special training program in demography
Torcuato di Tella Institute, Buenos Aires
A demographic-ecological analysis of the process of urbanization in Argentina 1870–1970
A program of demographic research of the Center for Social Research, for four years, continued
University of Buenos Aires, School of Public Health, Buenos Aires
The development of demographic teaching and research

Barbados
Queen Elizabeth General Hospital, Bridgetown
The demographic and cytological effects of an IUD program, continued

	Unpaid Jan. 1, 1970	Changes During Year: Grants (Cancellations)	Changes During Year: Payments (Refunds)	Unpaid Dec. 31, 1970
	$ 15,702.72	$ ——	$ 4,685.12	$ 11,017.60
	2,991.91	——	——	2,991.91
	$ 1,000.00	$ (311.27)	$ 688.73	——
	——	19,500.00	13,500.00	$ 6,000.00
	——	17,000.00	13,000.00	4,000.00
	——	8,000.00	——	8,000.00
	——	10,000.00	10,000.00	——
	121.78	3,599.92	3,721.70	——
	6,073.26	——	6,073.26	——
	5,000.00	——	5,000.00	——
	——	7,220.00	3,610.00	3,610.00
	25,000.00	——	——	25,000.00
	——	30,400.00	15,200.00	15,200.00
	478.40	(478.40)	——	——

Grants and Authorizations for the year ended December 31, 1970 (continued)

Central and Latin America (continued)

Brazil

Catholic University of Parana, Parana
- Serotonin metabolism and sexual differentiation of the rat hypothalamus, continued

Federal University of Bahia, Bahia
- The use-effectiveness of Silastic implants containing megestrol acetate, continued

Federal University of Minas Gerais, Faculty of Medicine, Horizonte
- A postpartum family planning program

"Luiz de Queiroz" Agricultural College, Sao Paulo
- Training in empirical research and evaluation of government policy on migrants into Sao Paulo

Chile

Catholic University of Chile, Santiago
- Fertility control in women with a parenterally administered capsule containing megestrol acetate

Catholic University of Chile, Sociological Investigation Center, Santiago
- A study of demographic transition at the family level in a rural community, and the testing of a model concerning responses to population pressure produced by new patterns of mortality and fertility

Latin American Demographic Center (CELADE), Santiago
- The administration of rural fertility studies in Colombia and Costa Rica
- A coordinated program of study on the incidence and circumstances of induced abortion in several Latin American countries, continued
- Comparative fertility studies in Latin America, continued

National Health Service, Santiago
- IUDs and inserters for a large-scale family planning program

Southern University of Chile, Valdivia
- The neuroendocrine control of gonadotropin secretion during development, continued

University of Chile, Santiago
- The effects of age, parity and child spacing on maternal and perinatal mortality and morbidity
- Sperm migration and fertilization in TCu users

University of Chile, "B" Professorship of Hygiene and Preventive and Social Medicine, Santiago
- A family planning statistical unit, continued

University of Chile, "E" Professorship of Obstetrics, Santiago
- The administration of low doses of megestrol acetate

	Unpaid Jan. 1, 1970	Changes During Year: Grants (Cancellations)	Payments (Refunds)	Unpaid Dec. 31, 1970
	——	$ 28,000.00	$ 21,000.00	$ 7,000.00
	——	10,000.00	10,000.00	——
	——	11,300.00	——	11,300.00
	——	920.00	920.00	——
	$ 24,000.00	4,000.00	16,131.34	11,868.66
	——	3,674.00	——	3,674.00
	——	8,241.00	8,241.00	——
	18,269.33	——	5,000.00	13,269.33
	13,825.00	5,703.00	5,703.00	13,825.00
	——	6,100.00	6,100.00	——
	——	15,700.00	15,700.00	——
	——	9,740.00	——	9,740.00
	——	4,300.00	——	4,300.00
	9,825.00	——	3,275.00	6,550.00
	44,000.00	——	24,078.25	19,921.75

Central and Latin America (continued)

Chile (*continued*)
University of Chile, "E" Professorship of Obstetrics, Santiago
The mechanism of action of intrauterine copper in women, continued
The mechanisms of action and use-effectiveness of metals and cytotoxic agents as contraceptive methods, continued
The reduction of induced abortion and fertility rates through provision of contraceptives, continued
The San Gregorio Project, continued
The use-effectiveness of T32 Cu (20 mm)
University of Chile, Institute of Physiology, Santiago
The effects of gonadal hormones and contraceptive drugs on unit activity of the brain, continued
The local action of metal ions and cytotoxic agents on the endometrium, continued
The mechanisms of action of metallic ions and cytotoxic agents upon fertility in rats, continued
University of Chile, School of Medicine, Santiago
The mechanism of action of active intrauterine foreign bodies

Colombia
Colombian Association of Medical Schools (ASCOFAME), Bogota
An expanded countrywide postpartum family planning program, continued
To finance visiting lecturers for the Popoyan Conference, April 14–23, 1969
IUDs and inserters for a large-scale family planning program
The maintenance and activities of the Population Council office in Bogota, continued
A postpartum follow-up survey
A program of surveys and studies, including a national fertility survey, continued
The publication and dissemination of original or translated materials on population in Spanish, continued
Research, training, evaluation and family planning activities, continued
A resident advisor, continued
A resident medical advisor
A seminar on population and education, November 1970
Ministry of Public Health, Bogota
IUDs and inserters for a large-scale family planning program

	Changes During Year		
Unpaid Jan. 1, 1970	Grants (Cancellations)	Payments (Refunds)	Unpaid Dec. 31, 1970
$ 1,036.10	——	——	$ 1,036.10
18,365.64	$ 47,385.00	$ 36,113.69	29,636.95
——	19,000.00	19,000.00	——
25,000.00	(25,000.00)	——	——
——	7,200.00	7,200.00	——
333.36	(943.20)	(609.84)	——
4,047.10	——	2,355.95	1,691.15
——	19,180.00	19,180.00	——
——	9,750.00	9,750.00	——
277,293.81	354,108.00	188,914.71	442,487.10
1,964.13	(1,964.13)	——	——
——	9,720.00	6,013.64	3,706.36
6,032.53	30,000.00	6,879.88	29,152.65
——	8,100.00	8,100.00	——
63,757.50	(39,938.00)	23,819.50	——
18,608.72	81,024.57	32,701.68	66,931.61
——	582,406.00	266,612.30	315,793.70
52,484.64	44,543.83	68,088.35	28,940.12
——	47,300.00	35,760.06	11,539.94
——	8,883.78	8,883.78	——
——	4,345.00	1.60	4,343.40

Central and Latin America (continued)

Colombia (continued)

Pan-American Federation of Associations of Medical Schools (FEPAFAM), Bogota
- Activities in population and demography, continued
- A travel grant to enable Dr. Jorge Villarreal Mejia to attend the tenth annual conference of the Indian Association of the Advancement of Medical Education, Sri Venkateswara University, Tirupati, India

University of the Andes, Bogota
- The expansion of the demographic training and research program, for three and one-half years, continued

University of Antioquia, School of Public Health, Medellin
- The establishment of teaching programs in demography and family planning

del Valle University, Cali
- Microdose progestin contraception
- Oxytocin release during and after IUD insertion in postpartum women

Costa Rica

Department of Statistics and the Census, San Jose
- Keypunching and verification of KAP study cards

Dominican Republic

National Council of Population and the Family, Santo Domingo
- Family planning communication studies
- A national family planning program, continued

Ecuador

Ministry of Public Health, Quito
- IUDs and inserters for a large-scale family planning program

El Salvador

Salvadorian Demographic Association, San Salvador
- A regional training program on population and family planning in Central America and Panama

Guatemala

Association for Family Welfare, Guatemala City
- A microdose progestogen study, continued

Central American Institute of Population and the Family, Guatemala City
- Analysis and reporting of population studies
- A study of the socio-cultural conditioning of the Guatemalan married couple, for six months

	Changes During Year		
Unpaid Jan. 1, 1970	Grants (Cancellations)	Payments (Refunds)	Unpaid Dec. 31, 1970
$ 50,000.00	——	$ 25,000.00	$ 25,000.00
——	$ 2,175.00	1,823.25	351.75
160,799.57	(19,821.57)	22,073.50	118,904.50
——	38,680.00	17,840.00	20,840.00
15,000.00	——	——	15,000.00
——	4,600.00	4,600.00	——
——	1,000.00	1,000.00	——
——	10,000.00	10,000.00	——
——	97,800.00	65,200.00	32,600.00
155.05	(27.66)	127.39	——
9,440.00	——	——	9,440.00
——	835.00	835.00	——
30,000.00	——	30,000.00	——
——	9,650.00	5,000.00	4,650.00

Grants and Authorizations for the year ended December 31, 1970 (continued)

Central and Latin America (continued)

Haiti

University of Haiti Hospital, Center for Maternal and Child Hygiene, Port-au-Prince
IUDs for a clinic demonstration center

Honduras

Honduran Family Planning Association, Tegucigalpa
For the purchase of IUDs
A postpartum family planning program at Hospital General San Felipe
A postpartum family planning program at Hospital Leonardo Martinez, San Pedro Sula, continued
A postpartum family planning program at Hospital Materno Infantil, for fourteen months

Mexico

College of Mexico, Mexico City
A knowledge, attitudes and practices study of the rural population of Mexico, for fifteen months
Foundation for the Study of Population, Mexico City
A study of clinic dropouts
A two-hospital postpartum family planning program
Latin American Association for Research in Human Reproduction, Mexico City
Partial travel expenses of participants to fourth meeting of the Association
Women's Hospital, Mexico City
A postpartum family planning program, continued
A postpartum follow-up survey, for eight months

Nicaragua

Ministry of Public Health, Managua
IUDs and inserters for a national family planning program

Paraguay

Paraguayan Center for the Study of Population, Asuncion
A general purpose study of the socio-demographic characteristics of the Asuncion population and of one outlying city
The Third National Family Planning Seminar, August 30–September 3, 1970

Peru

Catholic University of Peru, Lima
A resident advisor in demography

	Unpaid Jan. 1, 1970	Changes During Year: Grants (Cancellations)	Payments (Refunds)	Unpaid Dec. 31, 1970
	$ 234.02	$ (234.02)	——	——
	——	330.00	——	$ 330.00
	7,822.27	——	$ 7,041.84	780.43
	5,733.90	19,570.00	5,010.00	20,293.90
	——	27,810.00	6,696.00	21,114.00
	15,058.73	——	15,058.73	——
	——	11,750.00	9,100.00	2,650.00
	15,338.00	——	15,338.00	——
	——	10,000.00	10,000.00	——
	——	45,440.00	28,000.00	17,440.00
	——	4,750.00	4,750.00	——
	398.67	1,271.33	1,651.63	18.37
	7,040.00	——	7,040.00	——
	——	6,000.00	6,000.00	——
	——	45,000.00	467.00	44,533.00

Grants and Authorizations for the year ended December 31, 1970 (continued)

Central and Latin America (continued)

Peru (*continued*)
Center for Studies in Population and Development, Lima
Analysis of urban and rural KAP studies
A study of induced abortion, continued
Cayetano Heredia University, Lima
Two studies: The biochemical diagnosis of antenatal malnutrition, and the physiology of human pregnancy at high altitudes
Studies of population at high altitudes at Cerro de Pasco, for three years, continued

Puerto Rico
Interamerican Planning Society, San Juan
Partial support for the eighth congress of SIAP and the section of the meeting on demography in Latin America
San Juan City Hospital, San Juan
A postpartum family planning program at the hospital and twelve satellite clinics, continued
University of Puerto Rico, San Juan
Expansion of the staff and research of the Demographic Section, over three years, continued
A follow-up study of surgically sterilized men, continued

Trinidad and Tobago
Harewood, Prof. Jack, University of the West Indies, St. Augustine, Trinidad
Travel expenses for an inspection of family planning programs in Japan, Taiwan, Hong Kong, Thailand and India

Uruguay
Clinic Hospital, Montevideo
The structural-biological activity relationship of human chorionic somatomammotropin
Maternity Hospital Association, Montevideo
Tubal and uterine contractility in women using an IUD, continued
University of Uruguay, Montevideo
The isolation and estimation of oxytocin from human blood, continued
Uruguayan Family Planning Association, Montevideo
Tubal and uterine contractility, continued

Venezuela
Concepcion Palacios Maternity Hospital, Caracas
Cervical cytology in a postpartum family planning program

	Changes During Year			
	Unpaid Jan. 1, 1970	Grants (Cancellations)	Payments (Refunds)	Unpaid Dec. 31, 1970
	——	$ 12,400.00	——	$ 12,400.00
	$ 4,710.00	——	$ 4,710.00	——
	——	7,950.00	7,950.00	——
	58,000.00	——	21,000.00	37,000.00
	——	5,000.00	5,000.00	——
	25,000.00	——	7,000.00	18,000.00
	12,333.34	——	——	12,333.34
	2,213.46	(2,213.46)	——	——
	——	1,200.00	1,075.00	125.00
	10,000.00	——	6,949.18	3,050.82
	2,315.00	——	——	2,315.00
	780.79	4,913.10	4,253.89	1,440.00
	——	10,000.00	10,000.00	——
	12,000.00	——	12,000.00	——

Grants and Authorizations for the year ended December 31, 1970 (continued)

Central and Latin America (continued)

Venezuela (*continued*)
Concepcion Palacios Maternity Hospital, Caracas
A national postpartum family planning program, for twenty-two months
A postpartum follow-up survey
Venezuelan Family Planning Association, Caracas
IUDs and inserters for a postpartum family planning program
A national postpartum family planning program, continued
Oral contraceptives for a family planning program
A postpartum follow-up survey

Europe

Austria
Innsbruck University Surgical Clinic, Innsbruck
Hormone release from Silastic implants in the human male

Belgium
International Union for the Scientific Study of Population, Liege
The expenses of participants at a Latin American population conference, Mexico City, August 17–22, 1970
The partial expenses of the meeting of the Organizing Committee of the 1971 African Regional Population Conference, June 1970
Support for various research committees, for two years

Finland
University of Helsinki, Helsinki
Steroid metabolism and hormonal regulation of reproduction, continued

France
International Institute for Education Planning, Paris
Methodologies for assessing the impact of population growth upon educational development
National Institute of Health and Medical Research, Paris
The hormonal conditioning of uterine receptivity for implantation, continued

Italy
Catholic University of the Sacred Heart, Rome
The effect of highly purified human urinary gonadotropins on ovarian morphology in fertile hypophysectomized women and human ovarian steroidogenesis *in vivo*, continued

	Unpaid Jan. 1, 1970	Changes During Year: Grants (Cancellations)	Changes During Year: Payments (Refunds)	Unpaid Dec. 31, 1970
	$ 1,700.00	$ 59,091.00	$ 11,330.53	$ 49,460.47
	——	8,361.00	8,361.00	——
	——	3,535.00	3,269.86	265.14
	242,420.62	301,733.00	200,431.92	343,721.70
	1,030.00	——	——	1,030.00
	——	5,250.00	5,250.00	——
	$ 675.00	——	$ 675.00	——
	——	$ 5,000.00	5,000.00	——
	——	3,000.00	3,000.00	——
	——	80,000.00	20,000.00	$ 60,000.00
	——	22,600.00	22,600.00	——
	30,000.00	——	30,000.00	——
	——	16,000.00	15,356.60	643.40
	——	22,000.00	22,000.00	——

Europe (continued)

Italy (*continued*)
University of Milan, Milan
Neuroendocrine factors involved in the control of corpus luteum
Radioimmunoassay of human LH and 178 estradiol
University of Naples, Naples
Comparative studies in neuroendrocrine reproduction
University of Rome, First Obstetrical and Gynecological Clinic, Rome
The biological effects of megestrol acetate from a sustained release form, continued

Spain
Higher Council of Scientific Investigation, Barcelona
Nuclear proteins during spermatogenesis in mammals

Sweden
Karolinska Institute, Stockholm
The metabolism of human spermatozoa in relation to male fertility, continued
University of Uppsala, Uppsala
The effects of luteolytic agents in women

Switzerland
World Health Organization, Geneva
The manufacture and shipment of Lippes loop mold cavities for the Ministry of Health, United Arab Republic
The purchase and shipment of Lippes loops and inserters for distribution in WHO maternity-centered family planning programs in developing countries

Union of Soviet Socialist Republics
Guzevaty, Prof. Y. N., and Yagodkin, Prof. V. N., University of Moscow, Moscow
A visit to population centers in the United States for discussions concerning a population training program
Valentei, Prof. Dimitri I., University of Moscow, Moscow
A visit by Professor Valentei and his interpreter to the Bureau of the Census, Washington, D.C., and to the population centers at Princeton University, the University of Pennsylvania and the University of Michigan

	Changes During Year			
Unpaid Jan. 1, 1970	Grants (Cancellations)		Payments (Refunds)	Unpaid Dec. 31, 1970
——	$ 29,100.00	$	29,100.00	——
——	4,000.00		4,000.00	——
——	5,000.00		5,000.00	——
——	31,760.00		31,760.00	——
——	28,000.00		25,647.68	$ 2,352.32
——	16,000.00		16,000.00	——
——	21,650.00		21,650.00	——
——	1,400.00		1,100.00	300.00
——	9,500.00		8,896.09	603.91
——	5,000.00		4,781.28	218.72
——	1,500.00		1,118.32	381.68

Europe (continued)

United Kingdom

Farmer, Mr. Colin, University of Aberdeen, Aberdeen
Procedures for the authorization of legal induced abortions in European countries

Hartree, Dr. Edward F., Agricultural Research Council, Cambridge
Travel and study award to enable Dr. Hartree to carry out comparative studies of sperm acrosomes and of lysomes from other tissues at Vanderbilt University, Nashville, Tennessee, U.S.A.

Institute for Research on Animal Diseases, Compton, Berkshire
The biochemistry of the luminal fluids of the female genital tract

London School of Economics and Political Science, London
To allow Mr. T.L.F. Devis to spend two months at the General Register Office, London
A review of estimates of recent rates of population growth in India

London School of Economics and Political Science, Population Investigation Committee, London
To subsidize the publication of *Population Studies*, the journal of the Population Investigation Committee, for three years

Shahani, Dr. Shanti, London
Round-trip air fare and per diem for thirty days to enable Dr. Shahani to learn new immunologic assay procedures in the Population Council Bio-Medical Division Laboratories and at the Cornell Medical Center

University of Bristol, Bristol
Neuronal basis of estrus rhythm and ovulation
A visit by D.K. Ola to the Western Region of Nigeria to do research on the diffusion of health service innovations, beginning July 1, 1970

University of Cambridge, Cambridge
Summer course "Advances in Reproductive Physiology" and travel funds for participants

University of London, Institute of Commonwealth Studies, London
A study of the political and organizational aspects of family planning programs in the developing countries of the Commonwealth, for three years

University of London, University College, London
The statistics of central nervous system malformation and reproductive wastage

University of Oxford, Oxford
The hormonal modifications of RNA and protein synthesis in the central nervous system

	Changes During Year			
	Unpaid Jan. 1, 1970	Grants (Cancellations)	Payments (Refunds)	Unpaid Dec. 31, 1970
	——	$ 1,000.00	$ 1,000.00	——
	$ 3,500.00	——	3,500.00	——
	——	26,500.00	13,250.00	$ 13,250.00
	476.50	(476.50)	——	——
	14,000.00	(14,000.00)	——	——
	——	3,600.00	3,600.00	——
	——	1,170.00	1,170.00	——
	13,000.00	——	——	13,000.00
	——	600.00	600.00	——
	——	3,000.00	3,000.00	——
	——	19,580.00	5,000.00	14,580.00
	13,500.00	——	——	13,500.00
	——	3,500.00	3,500.00	——

Europe (continued)

United Kingdom (continued)
University of Reading, Reading
The vascular and metabolic control of spermatogenesis and the physiology of the epididymis

Oceania

Australia
Flinders University of South Australia, Adelaide
The nature of spermagglutinins in human sera, continued

United States and Canada

California
Humboldt State College Foundation, Arcata
The micro-economics of family planning
Salk Institute for Biological Studies, San Diego
Interaction of luteinizing hormone with luteal cells
Stanford University, Palo Alto
The production of hypothalamic releasing factors from ovine hypothalamic
University of California, Berkeley
The isolation and identification of primate prolactin, continued
Motivational and promotional factors related to the acceptance of a birth control method in the postpartum period
Social and psychological aspects of abortion in Italy
University of California, Institute of Personality Assessment and Research, Berkeley
A two-day workshop and conference on the use of psychological assessment devices in population studies
University of California, Davis
Regulating reproductive activity with antigonadotropins, continued
University of California, Los Angeles
The effect of prostaglandin and other hormones on uterine sarcoplasmic reticulum, continued
A study of factors controlling luteal function in the rabbit

Colorado
Denver General Hospital, Denver
Studies on sterilization by transcervical oviduct occlusion, continued

	Changes During Year			
Unpaid Jan. 1, 1970	Grants (Cancellations)	Payments (Refunds)	Unpaid Dec. 31, 1970
——	$ 21,800.00	$ 21,800.00	——
$ 20,250.00	$ 23,355.00	$ 43,605.00	——
——	$ 50,756.00	$ 12,689.00	$ 38,067.00
——	12,000.00	12,000.00	——
——	10,000.00	10,000.00	——
$ 20,000.00	24,000.00	44,000.00	——
——	1,620.00	1,620.00	——
——	3,652.00	3,652.00	——
——	9,034.00	9,034.00	——
——	25,900.00	25,900.00	——
——	29,300.00	29,300.00	——
——	23,500.00	23,500.00	——
——	11,000.00	11,000.00	——

Grants and Authorizations for the year ended December 31, 1970 (continued)

United States and Canada (continued)

Colorado (*continued*)
University of Colorado, School of Medicine, Denver
The effects of gonadal hormone on the reninaldosterone system, continued
The stimulatory effects of peptide hormones that stimulate the uterus, continued

Connecticut
Center for Information on America, Washington
The preparation of materials to be used for population study in secondary schools in the United States
New England Institute, Ridgefield
Malucidin as an agent for the termination of pregnancy
University of Connecticut, Storrs
The influence of cerebral factors in gonadal physiology, continued
Pregnancy termination by bacterial lipopolysaccharides

Delaware
University of Delaware, College of Education, Newark
A teacher's workshop for the development of population awareness education curriculum materials, for use in American elementary and secondary schools, Summer 1970

District of Columbia
American Psychological Association, Washington
A one-day workshop on psychology, family planning and population policy, March 6, 1970
George Washington University, Washington
The role of uterine diamine oxidase activity in pregnancy
International Statistical Institute, Washington
Support for the thirty-eighth session of the Institute, August 10–20, 1971
Jackson, Dr. Cecil, George Washington University, Washington
Travel to Cambridge University, England, to collect zygotes from pigs and to study the effects of delayed fertilization, for two months beginning July 1, 1970
The Johns Hopkins University, School of Advanced International Studies, Washington
A study of the development of population policy in Colombia with special reference to the role of the Colombian Association of Medical Schools (ASCOFAME)
Lawrence, Charles B., Washington
Travel to an ECAFE meeting on statistics and planning in Moscow

	Changes During Year			
Unpaid Jan. 1, 1970	Grants (Cancellations)		Payments (Refunds)	Unpaid Dec. 31, 1970
——	$ 21,000.00	$	21,000.00	——
——	22,500.00		22,500.00	——
——	6,370.00		6,370.00	——
——	25,000.00		25,000.00	——
——	23,000.00		23,000.00	——
——	20,000.00		20,000.00	——
——	30,000.00		30,000.00	——
——	2,500.00		2,241.64	$ 258.36
——	20,000.00		——	20,000.00
——	5,000.00		5,000.00	——
——	2,000.00		2,000.00	——
——	3,995.00		3,995.00	——
$ 134.05	(134.05)		——	——

United States and Canada (continued)

District of Columbia (*continued*)
Organization of American States, Washington
National and regional seminars in Latin America concerned with population trends and economic and social development
Population Association of America, Washington
Activities to strengthen the demographic profession, for two years
Population Reference Bureau, Washington
For general corporate purposes
Public information programs of the Latin American Department, for three years
Partial support for a publishing program in Latin America

Florida
University of Florida, College of Medicine, Gainesville
A family planning training and service program
University of Miami, Coral Gables
Immunochemical studies of capacitation and fertilization in the rabbit, continued
Study of the renin-like enzyme of the uterus, continued

Georgia
Emory University, School of Medicine, Atlanta
Estrogen secretion by the human testis, continued
A family planning training and service program
Hypothalamic control of prolactin secretion
A population and family planning training program for medical students, during the summers of 1969 and 1970, continued

Hawaii
University of Hawaii, Honolulu
The analysis of fertilization mechanisms in mammals
To chronicle the events in Hawaii that led to the change in the state's abortion law
A project on pregnancy, birth control and abortion
University of Hawaii, Social Science Research Institute, Honolulu
To prepare estimates of basic fertility measures for a reanalysis of the 1966 Korean census

Illinois
University of Chicago, Chicago
A family planning training and service program

	Changes During Year			
Unpaid Jan. 1, 1970	Grants (Cancellations)		Payments (Refunds)	Unpaid Dec. 31, 1970
$ 83,334.00		——	$ 20,000.00	$ 63,334.00
——	$	75,460.00	17,545.00	57,915.00
20,000.00		——	20,000.00	——
10,466.00		——	10,466.00	——
——		25,000.00	25,000.00	——
66,730.00		163,597.00	189,430.00	40,897.00
——		21,000.00	21,000.00	——
——		20,000.00	20,000.00	——
——		18,000.00	18,000.00	——
164,997.00		(1,798.00)	142,499.00	20,700.00
23,900.00		——	11,900.00	12,000.00
9,915.00		——	9,915.00	——
——		12,600.00	12,600.00	——
——		6,820.00	6,820.00	——
——		10,000.00	10,000.00	——
37,888.00		——	37,888.00	——
152,943.00		(8,247.00)	101,962.00	42,734.00

Grants and Authorizations for the year ended December 31, 1970 (continued)

United States and Canada (continued)

Illinois (*continued*)
University of Chicago
Study and research in the statistical aspects of demographic models
University of Chicago, Community and Family Planning Studies Center, Chicago
Eighth Annual Summer Workshop on Family Planning, Summer 1970
University of Illinois, College of Medicine, Chicago
The actions of teratogens on early embryos and their membranes, continued
The controlled release of drugs through silicone membranes
University of Illinois, Urbana
A computer-simulation study of the effects of legal policy on population growth
The effects of the long-term administration of melangestrol acetate by silicone-rubber implants on reproduction in ewes
Luteinizing hormone uptake and interaction with target tissues, continued

Iowa
University of Iowa, Iowa City
The immunochemical purification of gonadotropins
Plasma estrogen and progestin measurements in human reproductive physiology

Kansas
Kansas University Endowment Association, Kansas City
The hormonal control of preimplantation stages of pregnancy, continued
University of Kansas, Medical Center, Kansas
The hormonal control of preimplantation stages of pregnancy, continued

Louisiana
Louisiana State University and A. & M. College, Baton Rouge
Phagocytosis of sperm in the epididymis of rabbits
Tulane University of Louisiana, New Orleans
The structure and chemical modification of LH-releasing hormone, continued

Maryland
The Johns Hopkins University, Baltimore
The analysis of data and the preparation of a monograph on the study of contraceptive users, sometime-users and non-users in Dacca, East Pakistan

	Changes During Year		
Unpaid Jan. 1, 1970	Grants (Cancellations)	Payments (Refunds)	Unpaid Dec. 31, 1970
$ 10,000.00	——	$ 5,000.00	$ 5,000.00
——	$ 18,000.00	18,000.00	——
——	14,700.00	14,700.00	——
——	30,000.00	30,000.00	——
——	2,200.00	2,200.00	——
——	5,000.00	5,000.00	——
——	15,650.00	15,650.00	——
——	14,000.00	14,000.00	——
——	500.37	500.37	——
——	15,900.00	15,900.00	——
——	18,300.00	18,300.00	——
——	10,000.00	10,000.00	——
——	12,000.00	12,000.00	——
——	5,686.00	5,686.00	——

Grants and Authorizations for the year ended December 31, 1970 (continued)

United States and Canada (continued)

Maryland (*continued*)
The Johns Hopkins University, Baltimore
Breast tumors in relation to previous therapy
The completion of pilot and methodological studies preparatory to a national survey of sexual behavior, fertility, family planning and illegitimacy among females 15–19 years old
The completion of a study of adoptions in Baltimore, for three months beginning November 1, 1970
The development of early mammalian embryos, continued
The effects of estrogen and progesterone on intermediary metabolism
Endocrine regulation of oogenesis
A family planning training and service program
National Institutes of Health, Bethesda
The Population Council's expenses in connection with a Survey of manpower in the field of population

Massachusetts
Harvard Medical School, Boston
Factors which influence development of mammalian eggs, continued
The structure and function of epididymis and vas deferens, continued
Massachusetts Institute of Technology, Cambridge
Data on the changing status of women in the U.S.A. as it affects their motivation to control their fertility
A study of public policy and migration in India, beginning June 1, 1970
Peter Bent Brigham Hospital, Boston
Pituitary-ovarian relationships in the menstrual cycle, continued
Williams College, Roper Public Opinion Research Center, Williamstown
The publication of 500 copies of *Sample Survey Questions on the Topic: Birth Control, Family Planning, Marriage and Population Growth*
Worcester Foundation for Experimental Biology, Shrewsbury
The initiation of a steroid analysis program in conjunction with a study on human ovarian function

Michigan
Grand Valley State College, Allendale
The Third Harvard Growth Study, continued
University of Michigan, Ann Arbor
The biochemistry of cycling, steroid treated, menopausal and pathological human female genital tract tissues

	Changes During Year			
Unpaid Jan. 1, 1970	Grants (Cancellations)		Payments (Refunds)	Unpaid Dec. 31, 1970
——	$ 16,700.00	$	16,700.00	——
——	9,885.00		9,885.00	——
——	3,000.00		3,000.00	——
——	24,960.00		24,960.00	——
$ 12,500.00	——		12,500.00	——
——	4,674.00		4,674.00	——
53,004.00	9,068.00		53,007.00	$ 9,065.00
7,169.85	——		2,599.66	4,570.19
——	29,200.00		29,200.00	——
——	20,000.00		20,000.00	——
——	1,800.00		1,800.00	——
——	10,983.00		——	10,983.00
——	24,000.00		24,000.00	——
——	4,924.50		4,924.50	——
——	4,000.00		4,000.00	——
12,250.00	——		12,250.00	——
33,000.00	——		33,000.00	——

United States and Canada (continued)

Michigan (*continued*)
University of Michigan, Ann Arbor
The economic correlates of family planning in Taiwan, 1969–1970
A study in Colombia of the pharmacist's role in disseminating information, for six months
A study of the economic correlates of family planning in Taiwan, continued
The regulation of human pituitary gonadotropins, continued
A research project entitled "Pills, Periods, and Personality"
A research project entitled "Psychological Psychosomatic Responses to the Oral Contraceptive"
University of Michigan, Center for Research on Economic Development, Ann Arbor
The effects of population growth on economic development in less developed countries
University of Michigan, Population Studies Center, Ann Arbor
A study of differential fertility in Mexico, for two years
Wayne State University, School of Medicine, Detroit
A family planning training and service program

Minnesota
University of Minnesota, Minneapolis
The dynamics of uptake of estrogens and androgens by human endometrium

New Hampshire
St. Anselm's College, Manchester
The interaction between spermatozoa and cells in tissue culture
Dartmouth College, Hanover
The effects of micro-dose progestins on aspects of carbohydrate metabolism, continued

New Jersey
Princeton University, Office of Population Research, Princeton
Postdoctoral study and research by Dr. J. N. Sinha
Postdoctoral study and research by Prof. Glen Cain

New York
American Eugenics Society, New York
For general corporate purposes

	Changes During Year		
Unpaid Jan. 1, 1970	Grants (Cancellations)	Payments (Refunds)	Unpaid Dec. 31, 1970
$ 15,100.00	——	$ 15,100.00	——
——	$ 6,930.00	6,930.00	——
——	29,000.00	——	$ 29,000.00
——	30,000.00	30,000.00	——
——	1,595.00	1,595.00	——
——	1,750.00	1,750.00	——
——	4,297.00	4,297.00	——
——	36,592.00	——	36,592.00
44,022.00	(26,153.00)	14,674.00	3,195.00
——	23,000.00	23,000.00	——
——	4,000.00	4,000.00	——
——	10,000.00	10,000.00	——
——	17,400.00	——	17,400.00
——	11,350.00	11,350.00	——
12,000.00	——	6,000.00	6,000.00

United States and Canada (continued)

New York (*continued*)
American Eugenics Society, New York
A symposium on differential reproduction in individuals with mental and physical disability
Associated Universities, Upton
The effects of progestogens on serum lipids and insulin in carbohydrate-induced hyperlipemia
Columbia University, New York
The completion of long-term follow-up studies of IUD users
A double blind evaluation of TCu and polyethylene loop D intrauterine devices
The use-effectiveness and extended use-effectiveness of IUD data
Columbia University, Bureau of Applied Social Research, New York
The development of data processing systems and models and the maintenance of a data bank on fertility and family planning
Columbia University, College of Physicians and Surgeons, New York
The binding of estradiol and progesterone to cellular fractions of endometrium and of myometrium, continued
The chemistry of human chorionic gonadotropin, continued
Columbia University, Harlem Hospital Center, New York
A family planning training and service program
Columbia University, International Institute for the Study of Human Reproduction, New York
A family planning training and service program
Columbia University, Teachers College, New York
The development of instructional materials for population study, continued
Cornell University, Cornell Medical College and Nursing School, New York
Antispermatogenic agents in the human male
The isolation, chemistry and radioimmunoassay of pituitary hormones, supplementary award, continued
Plasma FSH and LH levels as determined by radioimmunoassay in normal subjects and patients with reproductive and related endocrine disorders
The utility and function of microbial enzymes in fertility control
Cornell University, Division of Urban Studies, Center for Housing and Environmental Studies, Ithaca
The construction and initial testing of a population policies game designed for instructional purposes

	Unpaid Jan. 1, 1970	Changes During Year: Grants (Cancellations)	Changes During Year: Payments (Refunds)	Unpaid Dec. 31, 1970
	——	$ 3,000.00	$ 3,000.00	——
	——	26,000.00	26,000.00	——
	——	10,000.00	10,000.00	——
	——	9,950.00	9,950.00	——
	——	3,500.00	3,500.00	——
	——	43,615.00	20,000.00	$ 23,615.00
	——	32,000.00	32,000.00	——
	——	20,400.00	20,400.00	——
$	130,797.00	(30,832.00)	17,300.26	82,664.74
	58,119.00	18,205.00	38,764.00	37,560.00
	——	38,600.00	25,000.00	13,600.00
	——	5,000.00	5,000.00	——
	——	4,000.00	4,000.00	——
	——	19,500.00	19,500.00	——
	——	9,750.00	9,750.00	——
	——	27,687.00	27,687.00	——

United States and Canada (continued)

New York (*continued*)

Cornell University, International Population Program, Ithaca
- The evaluation of information and education materials on population and family planning in Latin America
- A program of research in Niger, to be carried out through the International Population Program, for eighteen months
- A resident advisor to the Mexican Demographic Association
- A six-week institute for training selected faculty in demography and population policy, Summer 1971

Institute of Public Administration, New York
- A study of the roles of institutes of public administration in population and family planning programs, for eighteen months

Klinger, Dr. Harold P., Yeshiva University, Albert Einstein College of Medicine, New York
- Travel to and study at the University of Oxford, England, commencing September 1, 1970, for eight months

Luckett, Dr. Patrick, Columbia University, New York
- Travel to and study at the Hubrecht Laboratory, Utrecht, Netherlands, for work in comparative placentation in primates

Margaret Sanger Research Bureau, New York
- Biochemical investigations of cycling, steroid treated, menopausal and pathological human female genital tract tissues, continued
- The safety, acceptability, and effectiveness of intrauterine devices, and training of physicians in their use

Mount Sinai School of Medicine, New York
- Abortion attitudes and incidence among the Mount Sinai Clinic population and East Harlem community

National Bureau of Economic Research, New York
- The convening of a conference on the economic determinants of human fertility, to be held Spring 1973

New York University, School of Medicine, New York
- The clinical evaluation of T device with copper
- A family planning training and service programs

Planned Parenthood Center of Buffalo, Buffalo
- The evaluation of loops made of three separate materials

Population Council, New York
- The analysis and study of questions of population policy
- A collaborative program for the study of immediate post-abortion insertion of IUDs
- A contraceptive development program

	Changes During Year		
Unpaid Jan. 1, 1970	Grants (Cancellations)	Payments (Refunds)	Unpaid Dec. 31, 1970
$ 26,508.00	——	——	$ 26,508.00
——	$ 50,000.00	$ 25,000.00	25,000.00
——	12,243.00	12,243.00	——
——	69,517.00	10,000.00	59,517.00
——	62,290.00	45,000.00	17,290.00
——	3,000.00	3,000.00	——
——	500.00	500.00	——
——	33,000.00	33,000.00	——
——	30,000.00	30,000.00	——
——	5,252.50	5,252.50	——
——	20,000.00	2,500.00	17,500.00
——	5,000.00	5,000.00	——
90,585.00	1,818.00	81,635.00	10,768.00
——	26,700.00	26,700.00	——
167,494.83	——	41,888.54	125,606.29
20,564.47	——	——	20,564.47
2,962,611.42	——	285,925.95	2,676,685.47

United States and Canada (continued)

New York (*continued*)
Population Council, New York
The development of contraceptive materials
The distribution of a film on family planning prepared by Walt Disney Productions, Inc., continued
The editing and publication of a book on the population growth and economic development of tropical West Africa
An evaluation program of knowledge, attitudes and practice in family planning
Experimental studies on the methods of obtaining information on the incidence and circumstances of induced abortion in the United States, continued
Fellowships in demography at selected American universities, 1968–1969
A film on intrauterine contraception
A follow-up survey in 31 large hospitals on postpartum family planning acceptors in Mexico, Venezuela, Hong Kong, Turkey, Thailand, Iran, Philippines, Colombia, Indonesia and Pakistan, for about eight months
An information service on population and family planning
A maternity services/family planning study
The necessary staff and other services required in connection with Council supervision of the Medical Schools Family Planning Program
A North African regional program in family planning to further advisory, educational and evaluative aspects
A postpartum family planning program—delivery hospitals in several countries
A postpartum research project
A program in genetics and population characteristics
A special fund for contraceptive supplies
Special projects which further the general objectives of the Population Council
Studies on mortality and energy metabolism of spermatozoa, continued
A survey of attitudes toward abortion
A task force on health aspects of family planning
The Research Foundation of the City of New York, New York
The isolation and identification of sterility agents in Caladium leaves
The Research Foundation of the State University of New York, New York
Chromosomal abnormalities in abortion material from pregnant women who had used oral contraceptives, continued
The evaluation of clinical usage of new intrauterine devices and the investigation of possible mechanisms of action

	Changes During Year			
	Unpaid Jan. 1, 1970	Grants (Cancellations)	Payments (Refunds)	Unpaid Dec. 31, 1970
	$ 14,048.42	$ (16,748.74)	$ (2,700.32)	——
	17,453.67	——	7,157.53	$ 10,296.14
	——	12,000.00	5,820.00	6,180.00
	100,167.29	——	100,167.29	——
	42,771.63	(42,771.63)	——	——
	11,483.50	(11,483.50)	——	——
	2,075.00	——	——	2,075.00
	——	40,464.00	——	40,464.00
	35,712.76	——	35,712.76	——
	71,447.44	——	18,194.52	53,252.92
	159,520.79	(100,304.00)	49,957.55	9,259.24
	171,016.45	355,500.00	138,705.13	387,811.32
	32,062.39	(20,775.89)	11,286.50	——
	273,209.12	(100,000.00)	132,148.67	41,060.45
	9,505.96	——	——	9,505.96
	964.82	(6.04)	958.78	——
	44,227.55	(675.00)	(675.00)	44,227.55
	1,329.15	(558.11)	——	771.04
	——	78,954.00	68,900.00	10,054.00
	——	——	(5,000.00)	5,000.00
	——	1,110.00	1,110.00	——
	——	5,000.00	5,000.00	——
	——	9,000.00	9,000.00	——

United States and Canada (continued)

New York (continued)
Rockefeller University, New York
The construction and equipment costs of the Population Council portion of the Tower Building Laboratory
The development of biostatistical techniques and computer use in bio-medical investigations associated with population research, continued
The development of programs for the analysis of experimental data, continued
The sex-hormone control of porphyrinheme synthesis
State University of New York, Downstate Medical Center, New York
Abortion ratios by age and parity
Yeshiva University, Albert Einstein College of Medicine, New York
Cytogenetic and genetic studies of post-contraceptive reproduction in man, continued
A family planning training and service program
A survey of attitudes of obstetricians/gynecologists toward abortion

North Carolina
University of North Carolina, Chapel Hill
The isolation of uterine luteolytic factor, continued

Ohio
Medical College of Ohio at Toledo, Toledo
Receptors for estradiol and oxytocin in the uterus
Case Western Reserve University, Cleveland
A family planning training and service program
Regulatory interactions between sex steroids and oxytocin release, continued
University of Cincinnati, Cincinnati
Senescent changes in female reproductive processes, continued

Ontario
Laurentian University of Sudbury, Sudbury
Neuroendocrine aspects of reproduction, continued

Oregon
Medical Research Foundation of Oregon, Portland
The regulation of spermatozoal energetics, continued

	Changes During Year		
Unpaid Jan. 1, 1970	Grants (Cancellations)	Payments (Refunds)	Unpaid Dec. 31, 1970
$ 800,000.00	$ 2,200,000.00	$ 1,357,432.09	$1,642,567.91
——	54,000.00	54,000.00	——
——	20,000.00	20,000.00	——
——	5,000.00	5,000.00	——
——	1,100.00	1,100.00	——
——	25,800.00	25,800.00	——
133,821.00	17,007.00	125,607.00	25,221.00
——	28,000.00	28,000.00	——
——	7,615.32	7,615.32	——
——	32,160.00	32,160.00	——
129,957.00	(77,109.00)	42,857.00	9,991.00
——	25,000.00	25,000.00	——
——	42,900.00	42,900.00	——
——	7,500.00	7,500.00	——
——	15,000.00	15,000.00	——

United States and Canada (continued)

Pennsylvania

American Institutes for Research, Pittsburgh
Attitudes toward family planning and motivations for parenthood of Negro and White college students
Better Family Planning, Inc., Philadelphia
A demonstration family planning program among disadvantaged groups in Philadelphia, continued
Pennsylvania Hospital, Philadelphia
The effectiveness of new types of intrauterine devices, continued
Temple University, Philadelphia
The effects of nucleic acid on gametes, continued
A family planning training and service program
University of Pennsylvania, Philadelphia
The development of mathematical models of mobility processes
A family planning training and service program
The role of blood platelets in egg implantation and pregnancy
Surveys of unmarried girls under the age of 18 years at The Sinai Hospital, Baltimore
University of Pittsburgh, Magee Women's Hospital, Pittsburgh
A family planning training and service program
Villanova University, Villanova
A symposium conducted by *Villanova Law Review* on "National Population Programs and Policy: Social and Legal Implications," April 3, 1970
Zelinsky, Prof. Wilbur, Pennsylvania State University, University Park
A summary and analysis of research frontiers in population geography

Quebec

McGill University, Montreal
Spermatogenesis in mammals including man, continued

Rnode Island

Brown University, Population Studies and Training Center, Providence
The analysis of special tabulation data from the 1960 Population and Housing Census of Thailand relating to migration and social and economic status
Computer studies of family building in the United States, from September, 1968 to August, 1970

	Changes During Year			
Unpaid Jan. 1, 1970	Grants (Cancellations)	Payments (Refunds)	Unpaid Dec. 31, 1970
——	$ 9,996.00	$ 9,996.00	——
$ 3,000.00	147,000.00	101,853.78	$ 48,146.22
——	15,000.00	15,000.00	——
——	28,000.00	28,000.00	——
58,011.00	22,258.00	38,674.00	41,595.00
——	9,979.10	9,979.10	——
104,058.00	(5,280.00)	——	98,778.00
——	28,850.00	28,850.00	——
20,947.00	——	17,500.00	3,447.00
38,814.00	26,250.00	57,114.00	7,950.00
——	700.00	700.00	——
768.11	(396.15)	371.96	——
——	26,000.00	26,000.00	——
——	1,475.00	1,475.00	——
12,063.00	——	12,063.00	——

Grants and Authorizations for the year ended December 31, 1970 (continued)

United States and Canada (continued)

Tennessee
University of Tennessee, Nashville
The isolation of uterine luteolytic factor, continued
Vanderbilt University, Nashville
Development investigations on new antiprogestational agents
Sperm maturation and resorption in the epididymis

Texas
Southwest Foundation for Research and Education, San Antonio
The mode of action of intrauterine devices in primates, continued
Texas Southern University, Houston
The role of hormones in gonadotropic secretion and pregnancy block
University of Texas, Southwestern Medical School, Dallas
The dynamics of the hormonal aspects of the hypothalamic-adenohypophysial-ovarian axis, continued

Virginia
University of Virginia, Charlottesville
The regulation of estrus in the canine, continued

Washington
Population Dynamics, Seattle
The production of a professional training film on male sterilization

West Virginia
West Virginia University, School of Medicine, Morgantown
A family planning training and service program

Wisconsin
University of Wisconsin, Madison
A family dynamics and family planning project in Uruguay
Research on human population genetics in India

Unpaid Jan. 1, 1970	Changes During Year: Grants (Cancellations)	Payments (Refunds)	Unpaid Dec. 31, 1970
——	$ 12,384.68	$ 12,384.00	$ .68
——	3,240.00	3,240.00	——
——	8,100.00	8,100.00	——
——	56,900.00	56,900.00	——
——	15,000.00	15,000.00	——
——	25,000.00	25,000.00	——
$ 18,250.00	7,150.00	25,400.00	——
——	16,700.00	16,700.00	——
54,069.00	(8,486.00)	38,823.00	6,760.00
——	2,475.00	2,475.00	——
——	9,306.00	9,306.00	——

Demographic Fellowships
- 1965 Program
- 1966 Program
- 1967 Program
- 1968 Program
- 1969 Program
- 1970 Program

Bio-Medical Fellowships
- 1965 Program
- 1966 Program
- 1967 Program
- 1968 Program
- 1969 Program
- 1970 Program

Technical Assistance Fellowships
- 1967 Program
- 1968 Program
- 1969 Program
- 1970 Program

	Unpaid Jan. 1, 1970	Changes During Year: Grants (Cancellations)	Payments (Refunds)	Unpaid Dec. 31, 1970
	$ 1,556.20	$ (583.20)	$ 713.00	$ 260.00
	1,172.13	(69.80)	517.30	585.03
	2,757.67	(422.04)	(310.97)	2,646.60
	15,455.68	(144.36)	12,546.87	2,764.45
	171,794.81	——	150,031.67	21,763.14
	——	362,500.00	161,023.10	201,476.90
	881.30	(35.00)	727.60	118.70
	1,674.86	(1,674.86)	——	——
	8,154.01	(5,681.31)	2,472.70	——
	16,476.21	(4,642.65)	5,632.73	6,200.83
	158,706.22	——	136,331.73	22,374.49
	——	350,000.00	177,881.62	172,118.38
	16,015.64	(8,802.89)	7,212.75	——
	14,458.27	(6,580.09)	2,746.95	5,131.23
	134,629.35	——	109,519.13	25,110.22
	——	215,000.00	104,840.56	110,159.44
	$12,051,012.80	$10,181,495.03	$11,059,532.49	$11,172,975.34

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